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URBEMIS 2002 For Windows 8.7.0

P:\Projects - All Users\D20800.00+\D20950.01 Santa Ana Metro East MU\Air Quality\Volub D20950.01 Santa Ana MU Overlay Construction South Coast Air Basin (Los Angeles area) File Name: Project Name: Project Location:

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

CONSTRUCTION EMISSION ESTIMATE	S						
					PM10	PM10	PM10
*** 2007 ***	ROG	NOx	CO	SO2	TOTAL	EXHAUST	DUST
TOTALS (lbs/day,unmitigated)	54.58	347.70	454.54	0.09	63.70	13.67	50.03
TOTALS (lbs/day, mitigated)	54.58	347.70	454.54	0.09	46.70	13.67	33.03
					PM10	PM10	PM10
*** 2008 ***	ROG	NOx	CO	SO2	TOTAL	EXHAUST	DUST
TOTALS (lbs/day,unmitigated)	1,433.85	487.73	693.42	0.00	17.60	17.04	0.56
TOTALS (lbs/day, mitigated)	1,433.85	487.73	693.42	0.00	17.60	17.04	0.56
					PM10	PM10	PM10
*** 2009 ***	ROG	NOx	CO	SO2	TOTAL	EXHAUST	DUST
TOTALS (lbs/day,unmitigated)	53.82	319.26	457.48	0.00	10.59	10.32	0.27
TOTALS (lbs/day, mitigated)	53.82	319.26	457.48	0.00	10.59	10.32	0.27

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File Name: P:\Projects - All Users\D20800.00+\D20950.01 Santa Ana Metro East MU\Air Quality\Volumerologic Name: D20950.01 Santa Ana MU Overlay Construction
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 *** TOTALS (lbs/day,unmitigated) TOTALS (lbs/day, mitigated)	ROG 54.58 54.58	NOx 347.70 347.70	CO 454.54 454.54	SO2 0.09 0.09	PM10 TOTAL 63.70 46.70	PM10 EXHAUST 13.67 13.67	PM10 DUST 50.03 33.03
*** 2008 *** TOTALS (lbs/day,unmitigated) TOTALS (lbs/day, mitigated)	ROG 1,433.85 1,433.85	NOx 487.73 487.73	CO 693.42 693.42	SO2 0.00 0.00	PM10 TOTAL 17.60 17.60	PM10 EXHAUST 17.04 17.04	PM10 DUST 0.56 0.56
*** 2009 *** TOTALS (lbs/day,unmitigated) TOTALS (lbs/day, mitigated)	ROG 53.82 53.82	NOx 319.26 319.26	CO 457.48 457.48	SO2 0.00 0.00	PM10 TOTAL 10.59 10.59	PM10 EXHAUST 10.32 10.32	PM10 DUST 0.27 0.27

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File Name: P:\Projects - All Users\D20800.00+\D20950.01 Santa Ana Metro East MU\Air Quality\Volu Project Name: D20950.01 Santa Ana MU Overlay Construction

Project Location: South Coast Air Basin (Los Angeles area) On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT

CONSTRUCTION EMISSION ESTIMATES

					PM10	PM10	PM10
*** 2007 ***	ROG	NOx	CO	SO2	TOTAL	EXHAUST	DUST
TOTALS (tpy, unmitigated)	1.70	11.32	14.08	0.00	1.69	0.43	1.26
TOTALS (tpy, mitigated)	1.70	11.32	14.08	0.00	1.32	0.43	0.89
					PM10	PM10	PM10
*** 2008 ***	ROG	NOx	CO	S02	TOTAL	EXHAUST	DUST
TOTALS (tpv, unmitigated)	22.31	44.94	62.76	0.00	1.64	1.60	0.04
TOTALS (tpy, mitigated)	22.31	44.94	62.76	0.00	1.64	1.60	0.04
					PM10	PM10	PM10
*** 2009 ***	ROG	NOx	CO	S02	TOTAL	EXHAUST	DUST
TOTALS (tpv, unmitigated)	0.59	3.51	5.03	0.00	0.11	0.11	0.00
TOTALS (tpy, mitigated)	0.59	3.51	5.03	0.00	0.11	0.11	0.00

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URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Users\D20800.00+\D20950.01 Santa Ana Metro East MU\Air Quality\Volum Project Name: D20950.01 Santa Ana MU Overlay Construction Project Location: South Coast Air Basin (Los Angeles area)

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Pounds/Day - Winter)

Construction Start Month and Year: October, 2007 Construction Duration: 18 Total Land Use Area to be Developed: 15 acres Maximum Acreage Disturbed Per Day: 5 acres Single Family Units: 0 Multi-Family Units: 500 Retail/Office/Institutional/Industrial Square Footage: 230000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day) CO SO2 ROG NOx TOTAL EXHAUST DUST Phase 1 - Demolition Emissions Fugitive Dust 14.31 14.31 Off-Road Diesel 43.35 282.96 355.62 11.20 11.20 0.00 On-Road Diesel 2.24 49.56 8.35 0 09 1.15 0.95 0.20 Worker Trips Maximum lbs/day 0.28 0.73 7.16 0.00 0.04 0.01 0.03 45.87 333.25 12.16 Phase 2 - Site Grading Emissions Fugitive Dust 50.00 50.00 347.60 452.39 13.67 Off-Road Diesel 54.40 13.67 0.00 0.00 0.00 On-Road Diesel 0.00 0.00 0.00 0.00 0.00 Worker Trips 0.18 0.10 0.00 0.03 Maximum lbs/day 454.54 54.58 0.00 63.70 13.67 50.03 Phase 3 - Building Construction Bldg Const Off-Road Diesel 0.00 0.00 0.00 0.00 0.00 0.00 Bldg Const Worker Trips 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Arch Coatings Off-Gas 0.00 Arch Coatings Worker Trips 0.00 0.00 0.00 0.00 0.00 0.00 Asphalt Off-Gas 0.00 Asphalt Off-Road Diesel 0.00 0 00 0.00 0 00 0.00 0 00 0.00 0.00 0.00 0.00 0.00 Asphalt On-Road Diesel 0.00 Asphalt Worker Trips 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Maximum lbs/dav 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Max lbs/day all phases 54.58 347.70 454.54 0.09 63.70 13.67 50.03 *** 2008*** Phase 1 - Demolition Emissions 0.00 0.00 0.00 0.00 Fugitive Dust 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Off-Road Diesel 0.00 0.00 On-Road Diesel 0.00 0.00 0.00 0.00 Worker Trips 0.00 Maximum lbs/day 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Phase 2 - Site Grading Emissions Fugitive Dust 0.00 0.00 Off-Road Diesel 0.00 0.00 0.00 0.00 0.00 0.00 0.00 On-Road Diesel 0.00 0.00 0.00 Worker Trips Maximum lbs/day 0.00 0.00 0.00 Phase 3 - Building Construction Bldg Const Off-Road Diesel Bldg Const Worker Trips 52.54 1.40 326.45 11.70 11.70 0.00 439.10 0.81 17.17 0.00 Arch Coatings Off-Gas 1,351.76 0.27 Arch Coatings Worker Trips 1.40 0.81 17.17 0.00 0.29 0.02 Asphalt Off-Road Diesel 25.94 157.42 218.35 5.26 5.26 0.00 0.00 Asphalt On-Road Diesel 2.19 0.05 0.05 0.00 0.12 0.42 Asphalt Worker Trips Maximum lbs/day 1,433.85 487.73 693.42 0.00 17.60 17.04 0.56 Max lbs/day all phases 1,433.85 487.73 693.42 0.00 17.60 17.04 0.56

*** 2009***

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Phase 1 - De Fugitive Dus Off-Road Die On-Road Dies Worker Trips Maximum 1b	esel sel	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	- 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
Phase 2 - Si Fugitive Dus Off-Road Die On-Road Dies Worker Trips Maximum 1b	te Grading Emissionst esel sel sel sos/day	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	- 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
Bldg Const C Bldg Const W Arch Coating Arch Coating Asphalt Off- Asphalt Off- Asphalt On-R Asphalt Work Maximum 1b	ildding Construction fff-Road Diesel forker Trips spoff-Gas spoff-	52.54 1.27 0.00 0.00 0.00 0.00 0.00 0.00 53.82					
Start Month/ Phase 1 Dura Building Vol Building Vol On-Road Truc Off-Road Equ No. Ty 1 Cc 2 Cr 2 Cr 8 Off 3 Ott	emolition Assumptic Year for Phase 1: tion: 1 months ume Total (cubic : ume Daily (cubic : k Travel (VMT): 18 ippent pe horete/Industrial anes ushing/Processing if Highway Trucks her Equipment actor/Loaders/Back	Oct '07 Feet): 750 Feet): 340 93 saws Equip	080 Hor	sepower 84 190 154 417 190 79	Load Factor 0.730 0.430 0.780 0.490 0.620 0.465	8	.0
Start Month/ Phase 2 Dura On-Road Truc Off-Road Equ No. Ty 3 Ex 6 Of 4 Ot 5 Sc	te Grading Assumpt (Year for Phase 2: tion: 2 months tk Travel (VMT): 0 tipment pe coavators ff Highway Trucks ther Equipment trapers cactor/Loaders/Back	Nov '07		sepower 180 417 190 313 79	Load Factor 0.580 0.490 0.620 0.660 0.465	5	.0
Start Month/ Phase 3 Dura Start Mont SubPhase B Off-Road E		Jan '08 e Buildir	ng: Jan 'C s				
4 Rd 6 Tr Start Mont SubPhase A Start Mont SubPhase A	pe aanes if Highway Trucks her Equipment bugh Terrain Forkli actor/Loaders/Back h/Year for SubPhas urchitectural Coat: h/Year for SubPhas sphalt Duration: i se Paved: 5	its hoes e Archite ngs Durat e Asphalt	ectural Co	atings: Denths	Load Factor 0.430 0.490 0.620 0.475 0.465 ac '08	8	.0
Off-Road E No. Ty 4 Of	quipment pe f Highway Trucks her Equipment			sepower 417 190 132	Load Factor 0.490 0.620 0.590	8	

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0.00 0.00 0.00 0.00 0.00

0.00 0.00 0.00 0.00 0.00

0.00

0.00 -0.00 0.00 0.00 0.27

0.27

4 Rollers			114	0.430		8.0	
CONSTRUCTION EMISSION ESTI	MATES MITIG	ATED (lbs/d	lay)				
Source *** 2007***	ROG	NOx	СО	S02	TOTAL	PM10 EXHAUST	DUST
Phase 1 - Demolition Emiss:	ions				1/1 21		1/ 21
Off-Road Diesel	43.35	282.96	355.62	_	11.20	11.20	0.00
On-Road Diesel	2.24	49.56	8.35	0.09	1.15	0.95	0.20
*** 2007*** Phase 1 - Demolition Emiss: Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	0.28 45.87	0.73 333.25	7.16 371.13	0.00	0.04 26.70	0.01 12.16	0.03 14.54
Phase 2 - Site Grading Emi: Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	ssions	_		_	33 00	_	33 00
Off-Road Diesel	54.40	347.60	452.39	_	13.67	13.67	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.18	0.10	2.15	0.00	0.03	0.00	0.03
Maximum lbs/day	54.58	347.70	454.54	0.00	46.70	13.67	33.03
Phase 3 - Building Construc	ction	0.00	0.00		0.00	0.00	0 00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00			-	-		-
Phase 3 - Building Construm Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Off-Gas Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Road Diesel Asphalt On-Road Diesel Asphalt Worker Trips Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Road Diesel	0.00	0.00	0.00		0.00	0.00	0.00
Asphalt Un-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	54.58	347.70	454.54	0.09	46.70	13.67	33.03
*** 2008***							
*** 2008*** Phase 1 - Demolition Emiss: Fugitive Dust	ions						
Off-Road Diesel	0.00	0 00	0 00	_	0.00	0 00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Findse I - Demoiftion Emiss. Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emi: Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	ssions						
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Un-Koad Diesel Worker Trins	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bldg Const Off-Road Diesel	52.54	326.45	439.10		11.70	11.70	0.00
Arch Coatings Off-Gas	1.351.76	0.01	1/.1/	0.00	0.29	0.02	0.27
Arch Coatings Worker Trips	1.40	0.81	17.17	0.00	0.29	0.02	0.27
Asphalt Off-Gas	0.60	-	-	-		-	-
Asphalt Off-Road Diesel	25.94	157.42	218.35	0.00	5.26	5.26	0.00
Asphalt Worker Trips	0.12	0.06	1.20	0.00	0.02	0.00	0.02
Phase 3 - Building Constru Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Gas Asphalt Off-Road Diesel Asphalt On-Road Diesel Asphalt Worker Trips Maximum lbs/day	1,433.85	487.73	693.42	0.00	17.60	17.04	0.56
Max lbs/day all phases	1,433.85	487.73	693.42	0.00	17.60	17.04	0.56
*** 2009***							
Phase 1 - Demolition Emiss:	ions				0.00		0 00
Off-Posd Diesel	0.00	0.00	0.00	_	0.00	0 00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 1 - Demolition Emiss: Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emi- Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	ssions -	_	-	_	0.00	_	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
maximum ibs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Phase 3 - Building Construct:	ion						
Bldg Const Off-Road Diesel	52.54	318.52	441.64	-	10.31	10.31	0.00
Bldg Const Worker Trips	1.27	0.74	15.84	0.00	0.29	0.02	0.27
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	53.82	319.26	457.48	0.00	10.59	10.32	0.27
Max lbs/day all phases	53.82	319.26	457.48	0.00	10.59	10.32	0.27

Construction-Related Mitigation Measures

Pavers

Rollers

Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily Percent Reduction (ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 34.0%) Phase 1 - Demolition Assumptions Start Month/Year for Phase 1: Oct '07 Phase 1 Duration: 1 months Building Volume Total (cubic feet): 750000 Building Volume Daily (cubic feet): 34080 On-Road Truck Travel (VMT): 1893 Off-Road Equipment Type Concrete/Industrial saws Horsepower Load Factor Hours/Day 0.730 8.0 84 190 Crushing/Processing Equip 154 0.780 Off Highway Trucks Other Equipment 417 0.490 8.0 190 Tractor/Loaders/Backhoes 0.465 8.0 Phase 2 - Site Grading Assumptions Start Month/Year for Phase 2: Nov '07 Phase 2 Duration: 2 months On-Road Truck Travel (VMT): 0 Off-Road Equipment Horsepower Load Factor Hours/Day No. Type Excavators 0.580 180 8.0 Off Highway Trucks Other Equipment 417 8.0 190 0.620 Scrapers Tractor/Loaders/Backhoes 313 79 0.660 8.0 0.465 Phase 3 - Building Construction Assumptions Start Month/Year for Phase 3: Jan '08 Phase 3 Duration: 15 months Start Month/Year for SubPhase Building: Jan '08 SubPhase Building Duration: 13 months Off-Road Equipment Type Cranes Off Highway Trucks Other Equipment Load Factor Hours/Day Horsepower No. 190 417 0.430 10 8.0 190 0.620 5.0 Rough Terrain Forklifts 94 79 0.475 8.0 Tractor/Loaders/Backhoes 0.465 8.0 Start Month/Year for SubPhase Architectural Coatings: Dec '08 Start Month/Year for SubPhase Architectural Coatings Duration: 1 months Start Month/Year for SubPhase Asphalt: Dec '08 SubPhase Asphalt Duration: 1 months Acres to be Paved: 5 Off-Road Equipment Type
Off Highway Trucks
Other Equipment Load Factor Hours/Day 417 190 0.490 8.0 5.0

132

114

0.590

0.430

8.0

8.0

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily has been changed from off to on.

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File Name: Project Name: Project Location: P:\Projects - All Users\D20800.00+\D20950.01 Santa Ana Metro East MU\Air Quality\Volu D20950.01 Santa Ana MU Overlay Construction South Coast Air Basin (Los Angeles area)

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Pounds/Day - Summer)

Construction Start Month and Year: October, 2007 Construction Duration: 18 Total Land Use Area to be Developed: 15 acres Maximum Acreage Disturbed Per Day: 5 acres Single Family Units: 0 Multi-Family Units: 500 Retail/Office/Institutional/Industrial Square Footage: 230000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

CONSTRUCTION ENISSION ESTI	AMILO UNHILL	ONIED (IDS	, day,		PM10	PM10	PM10
Source	ROG	NOx	co	SO2	TOTAL	EXHAUST	DUST
*** 2007***	1100	NOX	CO	502	IOIAL	LAHAOSI	5051
Phase 1 - Demolition Emiss	ions						
Fugitive Dust	43.35	_	_	_	14.31	_	14.31
Off-Road Diesel	43 35	282.96	355.62	_	11.20	11.20	0.00
On-Road Diesel	2.24	49.56	8.35	0.09	1.15	0.95	0.20
Warker Tring	0.20	0.72		0.00	0.04	0.01	0.03
Maximum lbs/day	45 07	333.25		0.00	26.70	12.16	14.54
Maximum ibs/day	45.07	333.23	3/1.13	0.03	20.70	12.10	14.54
Phase 2 - Site Grading Emi:	esions						
Fugitive Dust	-	_	_	_	50.00	_	50.00
Off-Road Diesel	54.40	347.60	452.39	_	13.67	13.67	0.00
On-Road Diesel	54.40 0.00	0.00		0.00	0.00	0.00	0.00
Worker Trips	0.18	0.10	2.15	0.00	0.03	0.00	0.03
Worker Trips Maximum lbs/day	54 58	347.70	454.54	0.00	63.70	13.67	50.03
Maximum ibs/day	34.30	347.70	454.54	0.00	63.70	13.07	30.03
Phase 3 - Building Constru	ation						
Bldg Const Off-Road Diesel		0.00	0.00	_	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	- 0.00	-	0.00	-	- 0.00	-
		0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Worker Trips Asphalt Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	_	0.00	0.00	0.00
Asphalt Off-Road Diesel	0.00						0.00
Asphalt On-Road Diesel		0.00	0.00	0.00	0.00	0.00	
Asphalt On-Road Diesel Asphalt Worker Trips Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	54.50	247 70	454.54	0.00	60 70	10.00	F0 00
Max lbs/day all phases	54.58	347.70	454.54	0.09	63.70	13.67	50.03
*** 2008***							
Phase 1 - Demolition Emiss:					0.00		0.00
Fugitive Dust		_	_	-	0.00	_	0.00
Off-Road Diesel	0.00	0.00	0.00		0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emi:	ssions						
Fugitive Dust	-	-	-	-	0.00	-	0.00
	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Constru							
Bldg Const Off-Road Diesel	52.54	326.45	439.10	-	11.70	11.70	0.00
Bldg Const Worker Trips	1.40	0.81	17.17	0.00	0.29	0.02	0.27
Arch Coatings Off-Gas	1,351.76	-	-	-	-	-	-
Arch Coatings Worker Trips	1.40	0.81	17.17	0.00	0.29	0.02	0.27
Asphalt Off-Gas	0.60	_	-	-	-	-	-
Asphalt Off-Road Diesel	25.94	157.42	218.35	-	5.26	5.26	0.00
Asphalt On-Road Diesel	0.12	2.19	0.42	0.00	0.05	0.05	0.00
Asphalt Worker Trips	0.10	0.06	1.20	0.00	0.02	0.00	0.02
Asphalt On-Road Diesel Asphalt Worker Trips Maximum lbs/day	1,433.85	487.73	693.42	0.00	17.60	17.04	0.56
	,						
Max lbs/day all phases	1,433.85	487.73	693.42	0.00	17.60	17.04	0.56

^{*** 2009***}

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Fugitive Off-Road	Demolition Emission						
Off-Road		ns					
	Dust	-	-	-	-	0.00	-
On Boad D	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
Worker Tr	piesel rips	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	lbs/day	0.00	0.00	0.00	- 0.00 0.00 0.00	0.00	0.00
Phase 2 -	City Consider Beiler						
Fugitive	Dust	-	_	_	_	0.00	-
Off-Road	Diesel	0.00	0.00	0.00	-	0.00	0.00
On-Road D	iesel	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	- Site Grading Emiss: Dust Diesel Liesel Lips 1 lbs/day	0.00	0.00	0.00	- 0.00 0.00 0.00	0.00	0.00
Bldg Cons	t Off-Road Diesel	52.54	318.52	441.64	_	10.31	10.31
Bldg Cons	t Worker Trips	1.27	0.74	15.84	0.00	0.29	0.02
Arch Coat	ings Off-Gas	0.00					
Arch Coat	ings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt C	Off-Road Diesel	0.00	0 00	0 00	_	0 00	0.00
Asphalt C	n-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt W	Jorker Trips	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	Building Construct: t Off-Road Diesel tt Worker Trips ings Off-Gas ings Worker Trips iff-Gas ff-Gas ff-Road Diesel m-Road Diesel lorker Trips l 1bs/day	53.82	319.26	457.48	0.00	10.59	10.32
Max lbs	day all phases	53.82	319.26	457.48	0.00	10.59	10.32
Building On-Road T	Concrete/Industria: Cranes Crushing/Processing Off Highway Trucks Other Equipment Tractor/Loaders/Bac	feet): 34 1893 1 saws g Equip	080	sepower 84 190 154 417 190 79	Load Factor 0.730 0.430 0.780 0.490 0.620 0.465	Hou	rs/Day 8.0 8.0 8.0 8.0 4.0
Start Mon Phase 2 D	Site Grading Assumpth/Year for Phase 2 Ouration: 2 months	: Nov '07					
Start Mon Phase 2 D On-Road T	th/Year for Phase 2 Duration: 2 months Truck Travel (VMT): (: Nov '07					
Start Mon Phase 2 D On-Road T Off-Road	th/Year for Phase 2 Duration: 2 months Truck Travel (VMT): (Equipment	: Nov '07	Hor				
Start Mon Phase 2 D On-Road T Off-Road No.	uth/Year for Phase 2 Duration: 2 months Pruck Travel (VMT): (Equipment Type Excavators	: Nov '07	Hor				
Start Mon Phase 2 D On-Road T Off-Road No.	uth/Year for Phase 2 Duration: 2 months Pruck Travel (VMT): (Equipment Type Excavators	: Nov '07	Hor				
Start Mon Phase 2 D On-Road T Off-Road No.	uth/Year for Phase 2 Duration: 2 months Pruck Travel (VMT): (Equipment Type Excavators	: Nov '07	Hor				
Start Mon Phase 2 D On-Road T Off-Road No.	uth/Year for Phase 2 Duration: 2 months Pruck Travel (VMT): (Equipment Type Excavators	: Nov '07	Hor				
Start Mon Phase 2 D On-Road T Off-Road No. 3 6 4 5 6 Phase 3 Start Mon Phase 3 D Start Mon SubPhase Off-Road	th/Year for Phase 2 buration: 2 months fruck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bac Building Construct: th/Year for Phase 3 buration: 15 months fonth/Year for SubPhie Building Duration d Equipment d Equipment	: Nov '07	tions ng: Jan '0 s	sepower 180 417 190 313 79	Load Factor 0.580 0.490 0.620 0.660 0.465	Hou	rs/Day 8.0 8.0 5.0 8.0 8.0
Start Mon Phase 2 D On-Road T Off-Road No. 3 6 4 5 6 Phase 3 - Start Mon Phase 3 D Start Mon SubPhase 3 D Start M	th/Year for Phase 2 buration: 2 months fruck Travel (VMT): (Equipment Type Excavators off Highway Trucks other Equipment Scrapers Tractor/Loaders/Bac Building Construct: th/Year for Phase 3 buration: 15 months lonth/Year for SubPhie Building Duration d Equipment	: Nov '07 Ckhoes ion Assump : Jan '08 ase Buildi : 13 month	tions ng: Jan '0 s	sepower 180 417 190 313 79	Load Factor 0.580 0.490 0.620 0.660 0.465	Hou	rs/Day 8.0 8.0 5.0 8.0 8.0
Start Mon Phase 2 D On-Road T Off-Road No. 3 6 4 5 6 Phase 3 - Start Mon Phase 3 D Start Mon SubPhase Off-Roa No. 3	th/Year for Phase 2 buration: 2 months fruck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bac Building Construct th/Year for Phase 3 buration: 15 months lonth/Year for SubPhie Building Duration d Equipment Type Cranes Cranes	: Nov '07 Ckhoes ion Assump : Jan '08 ase Buildi : 13 month	tions ng: Jan '0 s	sepower 180 417 190 313 79	Load Factor 0.580 0.490 0.620 0.660 0.465	Hou	rs/Day 8.0 8.0 5.0 8.0 8.0
Start Mon Phase 2 D On-Road T Off-Road No. 3 6 4 5 6 Phase 3 - Start Mon Phase 3 D Start Mon SubPhase Off-Roa No. 3	th/Year for Phase 2 buration: 2 months fruck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bac Building Construct th/Year for Phase 3 buration: 15 months lonth/Year for SubPhie Building Duration d Equipment Type Cranes Cranes	: Nov '07 Ckhoes ion Assump : Jan '08 ase Buildi : 13 month	tions ng: Jan '0 s	sepower 180 417 190 313 79	Load Factor 0.580 0.490 0.620 0.660 0.465	Hou	rs/Day 8.0 8.0 5.0 8.0 8.0
Start Mon Phase 2 D On-Road T Off-Road No. 3 6 4 5 6 Phase 3 - Start Mon Phase 3 D Start Mon SubPhase Off-Roa No. 3	th/Year for Phase 2 buration: 2 months fruck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bac Building Construct th/Year for Phase 3 buration: 15 months lonth/Year for SubPhie Building Duration d Equipment Type Cranes Cranes	: Nov '07 Ckhoes ion Assump : Jan '08 ase Buildi : 13 month	tions ng: Jan '0 s	sepower 180 417 190 313 79	Load Factor 0.580 0.490 0.620 0.660 0.465	Hou	rs/Day 8.0 8.0 8.0 8.0 8.0 8.0 8.0 5.0 8.0
Start Mon Phase 2 D On-Road T Off-Road No. 3 6 4 5 6 Phase 3 - Start Mon Phase 3 D Start Mon No. 3 10 4 4 6	th/Year for Phase 2 buration: 2 months fruck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bac Eucliding Construct. th/Year for Phase 3 buration: 15 months fonth/Year for SubPhie Building Duration de Equipment Type Cranes Off Highway Trucks Other Equipment Rough Terrain Fork. Tractor/Loaders/Bac Tractor/Loade	: Nov '07) ckhoes ion Assump : Jan '08 ase Buildi : 13 month	tions ng: Jan '0 s Hor	sepower 180 417 190 313 79 8 8 sepower 190 417 190 94	Load Factor 0.580 0.490 0.620 0.660 0.465 Load Factor 0.430 0.490 0.620 0.475	Hou	rs/Day 8.0 8.0 5.0 8.0 8.0
Start Mon Phase 2 D On-Road T Off-Road No. 3 6 4 5 6 Phase 3 - Start Mon Phase 3 D Start M SubPhas Start M	th/Year for Phase 2 puration: 2 months ruck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bac - Building Construct. th/Year for Phase 3 puration: 15 months lonth/Year for SubPh. e Building Duration d Equipment Type Crames Off Highway Trucks Other Equipment Rough Terrain Fork: Tractor/Loaders/Bac lonth/Year for SubPh. e Architectural Coat lonth/Year for SubPh. e Architectural Coat dott dott e Architectural Coat dott dott dott dott dott dequipment	: Nov '07 ckhoes ion Assumpp : Jan '08 see Buildi : 13 month lifts khoes saee Archit ings Dura saee Asphal	tions ng: Jan '0's Hor ectural Cc tion: 1 mc t: Dec '08	sepower 180 417 190 313 79 88 8 sepower 190 417 190 94 79 actings: Denths	Load Factor 0.580 0.490 0.620 0.660 0.465 Load Factor 0.430 0.490 0.620 0.475 0.465	Hou	rs/Day 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0
Start Mon Phase 2 D On-Road T Off-Road No. 3 6 4 5 6 Phase 3 - Start Mon Phase 3 D Start Mon Phase 3 I Off-Road No. 3 10 4 4 6 Start M SubPhas Start M SubPhas Start M SubPhas Start M SubPhas	th/Year for Phase 2 puration: 2 months Pruck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bac Building Construct: th/Year for Phase 3 puration: 15 months lonth/Year for SubPhe Building Duration d Equipment Type Cranes Off Highway Trucks Other Equipment Rough Terrain Fork: Tractor/Loaders/Bac Ionth/Year for SubPhe Architectural Coat lonth/Year for SubPhe Architectural Coat lonth/Year for SubPhe Architectural Coat lonth/Year for SubPhe Asphala Duration: o be Paved: 5 de Equipment	ckhoes ion Assump: Jan '08 ase Buildi: 13 month lifts ckhoes ase Archit ings Dura ase Asphal 1 months	tions ng: Jan '0's Hor ectural Cc tion: 1 mc t: Dec '08	sepower 180 417 190 313 79 88 8 sepower 190 417 190 94 79 actings: Denths	Load Factor 0.580 0.490 0.620 0.660 0.465 Load Factor 0.430 0.490 0.620 0.475 0.465	Hou	rs/Day 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0
Start Mon Phase 2 D On-Road T Off-Road No. 3 6 4 5 6 Phase 3 - Start Mon Phase 3 D Start M SubPhas Off-Road No. 3 10 4 4 6 Start M SubPhas SubPhas Start M Su	th/Year for Phase 2 puration: 2 months ruck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bac - Building Construct. th/Year for Phase 3 puration: 15 months lonth/Year for SubPh. e Building Duration d Equipment Type Crames Off Highway Trucks Other Equipment Rough Terrain Fork: Tractor/Loaders/Bac lonth/Year for SubPh. e Architectural Coat lonth/Year for SubPh. e Architectural Coat dott dott e Architectural Coat dott dott dott dott dott dequipment	ckhoes ion Assump Jan '08 ase Buildi 13 month lifts kkhoes ase Archit ings Dura ase Asphal 1 months	tions ng: Jan '0's Hor ectural Cc tion: 1 mc t: Dec '08	sepower 180 417 190 313 79 88 8 sepower 190 417 190 94 79 actings: Denths	Load Factor 0.580 0.490 0.620 0.660 0.465 Load Factor 0.430 0.490 0.620 0.475	Hou	rs/Day 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0

0.00 0.00 0.00 0.00 0.00

0.00 0.00 0.00 0.00 0.00

0.00

0.00 0.00 0.00 0.00 0.27 0.27

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4 Rollers			114	0.430		8.0	
CONSTRUCTION EMISSION ESTIM	MATES MITIGA	TED (lbs/d	lay)				
Source *** 2007***		NOx	СО	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007*** Phase 1 - Demolition Emissi Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	lons -	-	=	-	14.31	=	14.31
Off-Road Diesel	43.35	282.96	355.62	- 0.00	11.20	11.20	0.00
Worker Trips	0.28	0.73	7.16	0.09	0.04	0.95	0.20
Maximum 1bs/day	45.87	333.25	371.13	0.09	26.70	12.16	14.54
Phase 2 - Site Grading Emis	sions						
Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	E4 40	247 60	452.20	-	33.00	12 67	33.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.18	0.10	2.15	0.00	0.03	0.00	0.03
Maximum 1bs/day	54.58	347.70	454.54	0.00	46.70	13.67	33.03
Phase 3 - Building Construc	ction						
Bldg Const Off-Road Diesel	0.00	0.00	0.00	0 00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Road Diesel	0.00	0.00	0.00	_	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construc Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Off-Gas Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Road Diesel Asphalt On-Road Diesel Asphalt Worker Trips Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum ibs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	54.58	347.70	454.54	0.09	46.70	13.67	33.03
*** 2008***							
Direct 1 Demolitrica Delical	ons						
Fugitive Dust Off-Road Diesel	0.00	0.00	0.00	_	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Finase 1 - Demonstron Emissi Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Dust	· · · · 			-	0.00		0.00
Off-Road Diesel	0.00	0.00	0.00	0 00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emis Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construc	ction						
Bldg Const Off-Road Diesel	52.54	326.45	439.10	-	11.70	11.70	0.00
Arch Coatings Off-Gas	1.40	0.81	1/.1/	0.00	0.29	0.02	0.27
Arch Coatings Worker Trips	1.40	0.81	17.17	0.00	0.29	0.02	0.27
Asphalt Off-Gas	0.60	167 42	210 25	_	E 26	E 26	0.00
Asphalt On-Road Diesel	0.12	2.19	0.42	0.00	0.05	0.05	0.00
Asphalt Worker Trips	0.10	0.06	1.20	0.00	0.02	0.00	0.02
Phase 3 - Building Construc Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Off-Gas Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Road Diesel Asphalt On-Road Diesel Asphalt Worker Trips Maximum lbs/day	1,433.85	487.73	693.42	0.00	17.60	17.04	0.56
Max 1bs/day all phases	1,433.85	487.73	693.42	0.00	17.60	17.04	0.56
*** 2009***							
Phase 1 - Demolition Emissi	ons						
Fugitive Dust	0.00	0 00	0.00	_	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emis	ssions						
Fugitive Dust Off-Road Diesel	0.00	0.00	0.00	_	0.00	0.00	0.00
Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum ibs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Phase 3	- Building Construct:	Lon						
Bldg Con	st Off-Road Diesel	52.54	318.52	441.64	-	10.31	10.31	0.0
Blag Con	st worker irips	1.27	0.74	15.84	0.00	0.29	0.02	0.2
Arch Coa	tings UII-Gas	0.00	0 00	0.00	0.00	0 00	0 00	0 0
Arch Coa Asnhalt	Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Asphalt	Off-Road Diesel	0.00	0.00	0.00	_	0.00	0.00	0.0
Asphalt	On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Asphalt	Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.0
Maximu	- Building Construct: st Off-Road Diesel st Worker Trips tings Off-Gas tings Worker Trips Off-Gas Off-Road Diesel On-Road Diesel Worker Trips m lbs/day	53.82	319.26	457.48	0.00	10.59	10.32	0.2
Max 1b	s/day all phases	53.82	319.26	457.48	0.00	10.59	10.32	0.2
Construc	tion-Related Mitigat:	ion Measur	es					
Dhase 2	: Soil Disturbance: W	Jater evno	end curfac	ne - 2v d	ailu			
	nt Reduction (ROG 0.09							
	- Demolition Assumpt:							
	nth/Year for Phase 1:	Oct '07						
	Duration: 1 months	£+\ . 75	0000					
	Volume Total (cubic Volume Daily (cubic							
n-Boad	Trunck Transcal (MMT)	1002						
3 C C B 1	T .							
No.	Equipment Type Concrete/Industria: Cranes Crushing/Processing Off Highway Trucks Other Equipment Tractor/Loaders/Bad		Hor	sepower	Load Factor	Hou	rs/Day	
1	Concrete/Industria	L saws		84	0.730		3.0	
2	Cranes			190	0.430		3.0	
8	Off Highway Trucks	3 Eduib		417	0.780		3.0	
3	Other Equipment			190	0.620		4.0	
5	Tractor/Loadors/Ba	-1-1		7.0				
Phase 2	- Site Grading Assum	otions		79	0.465	1	3.0	
Phase 2 Start Mo Phase 2	- Site Grading Assummenth/Year for Phase 2: Duration: 2 months	otions : Nov '07						
Phase 2 Start Mo Phase 2	- Site Grading Assummenth/Year for Phase 2: Duration: 2 months	otions : Nov '07						
Phase 2 Start Mo Phase 2	- Site Grading Assummenth/Year for Phase 2: Duration: 2 months	otions : Nov '07						
Phase 2 Start Mo Phase 2	- Site Grading Assummenth/Year for Phase 2: Duration: 2 months	otions : Nov '07						
Phase 2 Start Mo Phase 2 On-Road Off-Road No. 3 6 4	- Site Grading Assum nth/Year for Phase 2: Duration: 2 months Truck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment	otions : Nov '07						
Phase 2 Start Mo Phase 2 On-Road Off-Road No. 3 6 4	- Site Grading Assum nth/Year for Phase 2: Duration: 2 months Truck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment	otions : Nov '07						
Phase 2 Start Mo Phase 2 On-Road Off-Road No. 3 6 4 5 6	- Site Grading Assumnth/Year for Phase 2: Duration: 2 months Truck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bac- - Building Construct: nth/Year for Phase 3:	otions Nov '07 ckhoes	Hor otions		0.465 Load Factor 0.580 0.490 0.620 0.660 0.465			
Phase 2 Start Mo Phase 2 On-Road Off-Road No. 3 6 4 5 6 Phase 3 Start Mo Phase 3	- Site Grading Assum nth/Year for Phase 2: Duration: 2 months Truck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bad- - Building Construct: nth/Year for Phase 3: Duration: 15 months	otions Nov '07 ckhoes ion Assump Jan '08	Hor	ssepower 180 417 190 313 79				
Phase 2 Start Mo Phase 2 On-Road Off-Road No. 3 6 4 5 6 Phase 3 Start Mo Phase 3 Start	- Site Grading Assumnth/Year for Phase 2: Duration: 2 months Truck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bac - Building Construct.nth/Year for Phase 3: Duration: 15 months Month/Year for SubPh Month/Year for SubPh	otions: Nov '07	Hor stions .ng: Jan '0	sepower 180 417 190 313 79	Load Factor 0.580 0.490 0.620 0.660 0.465	Hou	rs/Day 3.0 3.0 5.0 3.0	
Phase 2 Start Mo Phase 2 On-Road Off-Road No. 3 6 4 5 6 Phase 3 Start Mo Start	- Site Grading Assumnth/Year for Phase 2: Duration: 2 months Truck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bac - Building Construct.nth/Year for Phase 3: Duration: 15 months Month/Year for SubPh Month/Year for SubPh	otions: Nov '07	Hor stions .ng: Jan '0	sepower 180 417 190 313 79	Load Factor 0.580 0.490 0.620 0.660 0.465	Hou	rs/Day 3.0 3.0 5.0 3.0	
Phase 2 Start Mo Phase 2 On-Road Off-Road No. 3 6 4 5 6 Phase 3 Start Mo Start	- Site Grading Assumnth/Year for Phase 2: Duration: 2 months Truck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bac - Building Construct.nth/Year for Phase 3: Duration: 15 months Month/Year for SubPh Month/Year for SubPh	otions: Nov '07	Hor stions .ng: Jan '0	sepower 180 417 190 313 79	Load Factor 0.580 0.490 0.620 0.660 0.465	Hou	rs/Day 3.0 3.0 5.0 3.0	
Phase 2 Start Mo Phase 2 On-Road Off-Road No. 3 6 4 5 6 Phase 3 Start Mo Start	- Site Grading Assumnth/Year for Phase 2: Duration: 2 months Truck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bac - Building Construct.nth/Year for Phase 3: Duration: 15 months Month/Year for SubPh Month/Year for SubPh	otions: Nov '07	Hor stions .ng: Jan '0	sepower 180 417 190 313 79	Load Factor 0.580 0.490 0.620 0.660 0.465	Hou	rs/Day 3.0 3.0 5.0 3.0	
Phase 2 Start Mo Phase 2 On-Road Off-Road No. 3 6 4 5 6 Phase 3 Start Mo Start	- Site Grading Assumnth/Year for Phase 2: Duration: 2 months Truck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bac - Building Construct.nth/Year for Phase 3: Duration: 15 months Month/Year for SubPh Month/Year for SubPh	otions: Nov '07	Hor stions .ng: Jan '0	sepower 180 417 190 313 79	Load Factor 0.580 0.490 0.620 0.660 0.465	Hou	rs/Day 3.0 3.0 5.0 3.0	
Phase 2 Start Mo Phase 2 On-Road Off-Road No. 3 6 4 5 6 Phase 3 Start Mo Phase 3 Start	- Site Grading Assumnth/Year for Phase 2: Duration: 2 months Truck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bac - Building Construct.nth/Year for Phase 3: Duration: 15 months Month/Year for SubPh Month/Year for SubPh	otions: Nov '07	Hor stions .ng: Jan '0	sepower 180 417 190 313 79	Load Factor 0.580 0.490 0.620 0.660 0.465	Hou	rs/Day 3.0 3.0 5.0 3.0	
Phase 2 Start Mo Phase 2 On-Road Off-Road No. 3 6 4 5 6 Phase 3 Start Mo Start	- Site Grading Assumnth/Year for Phase 2: Duration: 2 months Truck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bac - Building Construct.nth/Year for Phase 3: Duration: 15 months Month/Year for SubPh Month/Year for SubPh	otions: Nov '07	Hor stions .ng: Jan '0	sepower 180 417 190 313 79	Load Factor 0.580 0.490 0.620 0.660 0.465	Hou	rs/Day 3.0 3.0 5.0 3.0	
Phase 2 Start Mo Phase 2 On-Road Off-Road No. 3 6 4 5 6 Phase 3 Start Mo Phase 3 Start SubPha Off-Ro No. 3 10 4 4 6 Start Ma Start SubPha Start SubPha	- Site Grading Assum nth/Year for Phase 2: Duration: 2 months Truck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bac - Building Construct: nth/Year for Phase 3: Duration: 15 months Month/Year for SubPhsee Building Duration: ad Equipment Type Cranes Off Highway Trucks Other Equipment Rough Terrain Fork: Tractor/Loaders/Bac Month/Year for SubPhsee Architer for SubPhsee Asphalt Duration:	ckhoes ion Assump : Jan '08 ase Buildi : 13 month lifts khoes sse Archit ings Dura sse Aspal	Hor ectural Co	sepower 180 417 190 313 79 8 8 sepower 190 417 190 94 77 99 417 190 94 79	Load Factor 0.580 0.490 0.620 0.660 0.465	Hou	rs/Day 3.0 3.0 5.0 3.0	
Phase 2 Start Mo Phase 2 On-Road Off-Road No. 3 6 4 5 6 Phase 3 Start Mo Phase 3 Start Mo Phase 3 Start SubPha Off-Ro No. 3 10 4 6 Start SubPha SubPha Addition	- Site Grading Assumnth/Year for Phase 2. Duration: 2 months Truck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Ofther Equipment Scrapers Tractor/Loaders/Bac - Building Construct: nth/Year for Phase 3. Duration: 15 months Month/Year for SubPh se Building Duration: ad Equipment Type Cranes Off Highway Trucks Other Equipment Rough Terrain Fork: Tractor/Loaders/Bac Month/Year for SubPh se Architectural Coat Month/Year for SubPh se Architectural Coat Month/Year for SubPh se Asphalt Duration: to be Pawed: 5	ckhoes ion Assumpt Jan '08 ase Buildi 13 month lifts khoes sse Archit ings Dura sse Aspal 1 months	Hor btions .ng: Jan '0' .s Hor .ectural Co .ttion: 1 mo t: Dec '08	sepower 180 417 190 313 79 88 sepower 190 417 190 94 79 valings: D	Load Factor 0.580 0.490 0.620 0.660 0.465 Load Factor 0.430 0.490 0.620 0.475 0.465	Hou	rs/Day 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	
Phase 2 Start Mo Phase 2 On-Road Off-Road No. 3 6 4 5 6 Phase 3 Start Mo Phase 3 Start Mo Phase 3 Start SubPha Off-Ro No. 3 10 4 6 Start SubPha SubPha Addition	- Site Grading Assumnth/Year for Phase 2. Duration: 2 months Truck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Ofther Equipment Scrapers Tractor/Loaders/Bac - Building Construct: nth/Year for Phase 3. Duration: 15 months Month/Year for SubPh se Building Duration: ad Equipment Type Cranes Off Highway Trucks Other Equipment Rough Terrain Fork: Tractor/Loaders/Bac Month/Year for SubPh se Architectural Coat Month/Year for SubPh se Architectural Coat Month/Year for SubPh se Asphalt Duration: to be Pawed: 5	ckhoes ion Assumpt Jan '08 ase Buildi 13 month lifts khoes sse Archit ings Dura sse Aspal 1 months	Hor btions .ng: Jan '0' .s Hor .ectural Co .ttion: 1 mo t: Dec '08	sepower 180 417 190 313 79 88 sepower 190 417 190 94 79 valings: D	Load Factor 0.580 0.490 0.620 0.660 0.465 Load Factor 0.430 0.490 0.620 0.475 0.465	Hou	rs/Day 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	
Phase 2 Start Mo Phase 2 On-Road Off-Road No. 3 6 4 5 6 Phase 3 Start Mo Phase 3 Start Mo No. 3 10 4 6 Start SubPha Off-Ro No. 3 10 4 5 Start SubPha A A A A A A A A A C B A A C B B A B B B B	- Site Grading Assumnth/Year for Phase 2. Duration: 2 months Truck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Ofther Equipment Scrapers Tractor/Loaders/Bac - Building Construct: nth/Year for Phase 3. Duration: 15 months Month/Year for SubPh se Building Duration: ad Equipment Type Cranes Off Highway Trucks Other Equipment Rough Terrain Fork: Tractor/Loaders/Bac Month/Year for SubPh se Architectural Coat Month/Year for SubPh se Architectural Coat Month/Year for SubPh se Asphalt Duration: to be Pawed: 5	ckhoes ion Assumpt Jan '08 ase Buildi 13 month lifts khoes sse Archit ings Dura sse Aspal 1 months	Hor btions .ng: Jan '0' .s Hor .ectural Co .ttion: 1 mo t: Dec '08	sepower 180 417 190 313 79 88 sepower 190 417 190 94 79 valings: D	Load Factor 0.580 0.490 0.620 0.660 0.465 Load Factor 0.430 0.490 0.620 0.475 0.465	Hou	rs/Day 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	
Phase 2 Start Mo Phase 2 On-Road Off-Road No. 3 6 4 5 6 Phase 3 Start Mo Phase 3 Start Mo No. 3 10 4 6 Start SubPha Off-Ro No. 3 10 4 5 Start SubPha A A A A A A A A A C B A A C B B A B B B B	- Site Grading Assumnth/Year for Phase 2. Duration: 2 months Truck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Ofther Equipment Scrapers Tractor/Loaders/Bac - Building Construct: nth/Year for Phase 3. Duration: 15 months Month/Year for SubPh se Building Duration: ad Equipment Type Cranes Off Highway Trucks Other Equipment Rough Terrain Fork: Tractor/Loaders/Bac Month/Year for SubPh se Architectural Coat Month/Year for SubPh se Architectural Coat Month/Year for SubPh se Asphalt Duration: to be Pawed: 5	ckhoes ion Assumpt Jan '08 ase Buildi 13 month lifts khoes sse Archit ings Dura sse Aspal 1 months	Hor btions .ng: Jan '0' .s Hor .ectural Co .ttion: 1 mo t: Dec '08	sepower 180 417 190 313 79 88 sepower 190 417 190 94 79 valings: D	Load Factor 0.580 0.490 0.620 0.660 0.465 Load Factor 0.430 0.490 0.620 0.475 0.465	Hou	rs/Day 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	
Phase 2 Start Mo Phase 2 Dn-Road Off-Road No. 3 6 4 5 6 Phase 3 Start Mo Phase 3 Start Mo No. 3 Start Mo No. 4 4 6 Start SubPha 4 6 Start SubPha Off-Ro No. 4 4 6 Start SubPha 6 Start SubPha Off-Ro No. 2 4 4 6 Start SubPha Start SubPha 6 SubPha 6 Start SubPha 6 SubPha	- Site Grading Assummth/Year for Phase 2: Duration: 2 months Truck Travel (VMT): (Equipment Type Excavators Off Highway Trucks Other Equipment Scrapers Tractor/Loaders/Bac - Building Construct: nth/Year for Phase 3: Duration: 15 months Bouration: 15 months ea Building Duration ad Equipment Type Crames Off Highway Trucks Other Equipment Rough Terrain Fork: Tractor/Loaders/Bac Month/Year for SubPhase Architectural Coat Month/Year for SubPhase Asphalt Duration: to be Paved: 5 ad Equipment	ckhoes ion Assumpt Jan '08 ase Buildi 13 month lifts khoes sse Archit ings Dura sse Aspal 1 months	Hor btions .ng: Jan '0' .s Hor .ectural Co .ttion: 1 mo t: Dec '08	sepower 180 417 190 313 79 88 sepower 190 417 190 94 79 valings: D	Load Factor 0.580 0.490 0.620 0.660 0.465	Hou	rs/Day 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily has been changed from off to on.

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URBEMIS 2002 For Windows 8.7.0

P:\Projects - All Users\D20800.00+\D20950.01 Santa Ana Metro East MU\Air Quality\Volumber D20950.01 Santa Ana MU Overlay Construction File Name: Project Name: Project Location: Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

Construction Start Month and Year: October, 2007 Construction Start Month and Year: October, 2007
Construction Duration: 18
Total Land Use Area to be Developed: 15 acres
Maximum Acreage Disturbed Per Day: 5 acres
Single Family Units: 0 Multi-Family Units: 500
Retail/Office/Institutional/Industrial Square Footage: 230000

CONSTRUCTION EMISSION ESTIMAT	res unmiti	GATED (ton	s/year)		PM10	PM10	PM10
Source *** 2007***	ROG	NOx	CO	SO2	TOTAL	EXHAUST	DUST
Phase 1 - Demolition Emission	0.0						
Fugitive Dust	-	_	_	_	0.16	_	0.16
Off-Road Diesel	0.48	3.11	3.91	_	0.12	0.12	0.00
On-Road Diesel	0.02	0.55	0.09	0.00	0.12	0.12	0.00
Worker Trips	0.02	0.01	0.09	0.00	0.01	0.01	0.00
	0.50	3.67	4.08	0.00	0.00	0.13	0.00
Total tons/year	0.50	3.07	4.00	0.00	0.29	0.13	0.16
Phase 2 - Site Grading Emiss:	ions						
Fugitive Dust	_	_	_	_	1.10	_	1.10
Off-Road Diesel	1.20	7.65	9.95	_	0.30	0.30	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00
Total tons/year	1.20	7.65	10.00	0.00	1.40	0.30	1.10
rocar como, year	1.20	7.00	10.00	0.00	1.10	0.50	1.10
Phase 3 - Building Construct:	ion						
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total all phases tons/yr	1.70	11.32	14.08	0.00	1.69	0.43	1.26
*** 2008***							
Phase 1 - Demolition Emission	ns						
Fugitive Dust	_	_	_	_	0.00	_	0.00
Off-Road Diesel	0.00	0.00	0.00	_	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-							
Phase 2 - Site Grading Emiss:							
Fugitive Dust				-	0.00		0.00
Off-Road Diesel	0.00	0.00	0.00	_	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Constructi	ion						
Bldg Const Off-Road Diesel	6.94	43.09	57.96	_	1.54	1.54	0.00
Bldg Const Worker Trips	0.18	0.09	2.20	0.00	0.04	0.00	0.04
3 C+: Off C	14.07						

*** 2009***

Bldg Const Worker Trips Arch Coatings Off-Gas

Asphalt Off-Gas Asphalt Off-Road Diesel

Asphalt On-Road Diesel

Asphalt Worker Trips Total tons/year Total all phases tons/yr

Arch Coatings Worker Trips

0.18

0.02 0.01 0.29

0.00

22.31

0.01

1.73

0.02

44.94

0.19

2.40

0.00 0.01 62.76

62.76

0.00

0.00 0.00 0.00

0.00

0.00

0.06

0.00 0.00 1.64

1.64

0.00

0.06

0.00 0.00 1.60

1.60

0.00

0.00

0.00

0.04

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Phase 1 - Demolition Emissions					0.00	
Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Total tons/year	0 00	0 00	0 00	_	0.00	0 00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emission	s					
Fugitive Dust	-	-	-	- 0.00 0.00 0.00	0.00	0.00 0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00
On-Road Diesel Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00
=						
Phase 3 - Building Construction	0 50	2 50	4 00		0 11	0 11
Bldg Const Worker Trips	0.56	0.01	0.17	0.00	0.11	0.11
Arch Coatings Off-Gas	0.00	-	-		-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	0 00	0 00	_	0 00	0 00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Off-Gas Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Road Diesel Asphalt On-Road Diesel Asphalt Owrker Trips Total tons/year	0.59	3.51	5.03	0.00	0.11	0.11
Total all phases tons/yr	0.50	2 51	E 0.2	0.00	0 11	0 11
iotai ali phases tons/yr	0.59	3.31	5.03	0.00	0.11	0.11
Phase 1 - Demolition Assumption	s					
Start Month/Year for Phase 1: 0						
Phase 1 Duration: 1 months						
Building Volume Total (cubic fe Building Volume Daily (cubic fe On-Road Truck Travel (VMT): 189	et): 75000	0				
On-Road Truck Travel (VMT): 189	et): 34060 3					
Off-Road Equipment	_					
No. Type		Horsep	ower	Load Factor	Hours	
1 Concrete/Industrial s 2 Cranes	aws	84		0.730		0
2 Crushing/Drosossing P	anin	154		0.430	8.	0
8 Off Highway Trucks 3 Other Equipment	darb	417		0.780 0.490 0.620	8. 8. 4.	0
		84 190 154 417 190 79		0.620	4.	0
5 Tractor/Loaders/Backh	oes	79		0.465	8.	0
Phase 2 - Site Grading Assumpti	ons					
Start Month/Year for Phase 2: N						
Phase 2 Duration: 2 months						
On-Road Truck Travel (VMT): 0 Off-Road Equipment						
No. Type		Horsen	ower	Load Factor	Hours	/Day
No. Type 3 Excavators		180		Load Factor 0.580	8.	0 -
6 Off Highway Trucks		417		() . 49()		0
4 Other Equipment 5 Scrapers		190 313		0.620	5.	0
6 Tractor/Loaders/Backh	oes	79		0.620 0.660 0.465	8.	0
				0.100	٠.	
Phase 3 - Building Construction	Assumptio	ns				
Start Month/Year for Phase 3: J	an '08					
Phase 3 Duration: 15 months Start Month/Year for SubPhase	Building:	Jan '08				
SubPhase Building Duration: 1	3 months					
Off-Road Equipment						
No. Type 3 Cranes		Horsep 190	ower	Load Factor 0.430	Hours 8.	/Day
10 Off Highway Trucks		417		0.430	8.	0
4 Other Equipment		190		0.620	5.	0
4 Rough Terrain Forklif	ts	94		0.475	8.	0
6 Tractor/Loaders/Backh Start Month/Year for SubPhase			nae: De	0.465	8.	U
Start Month/Year for SubPhase SubPhase Architectural Coatin				00		
Start Month/Year for SubPhase	Asphalt:					
SubPhase Asphalt Duration: 1	months					
Acres to be Paved: 5						
Off-Road Equipment						
No. Type		Horser	ower	Load Factor	Hours	/Dav
No. Type 4 Off Highway Trucks		417	ower	Load Factor 0.490	Hours 8.	0
4 Off Highway Trucks 2 Other Equipment		417 190		0.490	8. 5.	0
No. Type 4 Off Highway Trucks 2 Other Equipment 4 Pavers		417		Load Factor 0.490 0.620 0.590	Hours 8. 5. 8.	0

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0.00 0.00 0.00 0.00 0.00

0.00 0.00 0.00 0.00 0.00

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0.00

4 Rollers			114	0.430		8.0	
CONSTRUCTION EMISSION ESTIMAT	TES MITIGA	TED (tons/	year)		DW10	21110	D141.0
CONSTRUCTION EMISSION ESTIMATE Source *** 2007***	ROG	NOx	CO	S02	TOTAL	EXHAUST	PM10 DUST
Phase 1 - Demolition Emission Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Total tons/year	ns						
Fugitive Dust	0.48	3 11	3 91	_	0.16	0.12	0.16
On-Road Diesel	0.02	0.55	0.09	0.00	0.01	0.01	0.00
Worker Trips	0.00	0.01	0.08	0.00	0.00	0.00	0.00
Total tons/year	0.50	3.67	4.08	0.00	0.29	0.13	0.16
Phase 2 - Site Grading Emiss: Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Total tons/year	ions				0.72		0.73
Off-Road Diesel	1.20	7.65	9.95	_	0.73	0.30	0.73
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00
Total tons/year	1.20	7.65	10.00	0.00	1.03	0.30	0.73
Phase 3 - Building Construct:	ion						
Bldg Const Off-Road Diesel	0.00	0.00	0.00	_	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00						
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Road Diesel	0.00	0.00	0 00	_	0 00	0.00	0 00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construct: Bldg Const Off-Foad Diesel Bldg Const Worker Trips Arch Coatings Off-Gas Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Road Diesel Asphalt On-Road Diesel Asphalt Worker Trips Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total all phases tons/yr	1.70	11.32	14.08	0.00	1.32	0.43	0.89
*** 2008*** Phase 1 - Demolition Emission Fugitive Dust	18						
Fugitive Dust	-	_	_	_	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase I - Demolition Emission Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10041 00107 4041	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissi	Lons						
Fugitive Dust	-	-	-	-	0.00	-	0.00
On-Road Diesel	0.00	0.00	0.00	0 00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emiss: Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dhara 3 Duildin Contourt							
Bldg Const Off-Road Diesel	6.94	43.09	57.96	_	1.54	1.54	0.00
Bldg Const Worker Trips	0.18	0.09	2.20	0.00	0.04	0.00	0.04
Arch Coatings Off-Gas	14.87	-	-	-	-	-	-
Phase 3 - Building Construct: Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Off-Gas Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Road Diesel Asphalt On-Road Diesel Asphalt Worker Trips Total tons/year	0.02	0.01	0.19	0.00	0.00	0.00	0.00
Asphalt Off-Road Diesel	0.01	1.73	2.40	_	0.06	0.06	0.00
Asphalt On-Road Diesel	0.00	0.02	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00
Total tons/year	22.31	44.94	62.76	0.00	1.64	1.60	0.04
Total all phases tons/yr	22.31	44.94	62.76	0.00	1.64	1.60	0.04
*** 2009***							
	ns						
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 1 - Demolition Emission Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emiss: Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Total tons/year	ions				0.00		0.00
rugitive Dust	0.00	0.00	0.00	_	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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n						
0.58	3.50	4.86	-	0.11	0.11	0.00
0.01	0.01	0.17	0.00	0.00	0.00	0.00
0.00	-	-	-	-	-	_
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	-	-	-	-	-	-
0.00	0.00	0.00	-	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.59	3.51	5.03	0.00	0.11	0.11	0.00
0.59	3.51	5.03	0.00	0.11	0.11	0.00
	0.01 0.00 0.00 0.00 0.00 0.00 0.00 0.59	0.58 3.50 0.01 0.01 0.00 - 0.00 0.00 0.00 - 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.59 3.51	0.58 3.50 4.86 0.01 0.01 0.17 - 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$

Pavers

Rollers

Construction-Related Mitigation Measures Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 34.0%) Phase 1 - Demolition Assumptions Start Month/Year for Phase 1: Oct '07 Phase 1 Duration: 1 months Building Volume Total (cubic feet): 750000 Building Volume Daily (cubic feet): 34080 On-Road Truck Travel (VMT): 1893 Off-Road Equipment Load Factor Hours/Day Type Concrete/Industrial saws Horsepower No. 0.730 Cranes Crushing/Processing Equip 190 8.0 154 0.780 417 190 Off Highway Trucks 0.490 Other Equipment Tractor/Loaders/Backhoes 0.620 4.0 0.465 Phase 2 - Site Grading Assumptions Start Month/Year for Phase 2: Nov '07 Phase 2 Duration: 2 months On-Road Truck Travel (VMT): 0 Off-Road Equipment Horsepower Hours/Day No. Type Excavators Load Factor 180 0.580 8.0 Off Highway Trucks Other Equipment 417 190 0.490 8.0 0.620 Scrapers Tractor/Loaders/Backhoes 313 0.660 79 0.465 8.0 Phase 3 - Building Construction Assumptions Start Month/Year for Phase 3: Jan '08 Phase 3 Duration: 15 months Start Month/Year for SubPhase Building: Jan '08 SubPhase Building Duration: 13 months Off-Road Equipment Type Cranes No. Horsenower Load Factor Hours/Dav 0.430 190 8.0 Off Highway Trucks 417 190 0.490 Other Equipment Rough Terrain Forklifts 0.620 5.0 94 0.475 8.0 6 Tractor/Loaders/Backhoes 79 0.465 Start Month/Year for SubPhase Architectural Coatings: Dec '08 SubPhase Architectural Coatings Duration: 1 months Start Month/Year for SubPhase Asphalt: Dec '08 SubPhase Asphalt Duration: 1 months Acres to be Paved: 5 Off-Road Equipment Type Off Highway Trucks Horsepower Load Factor Hours/Day 417 190 0.490 8.0 Other Equipment 5.0

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0.590

0.430

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily has been changed from off to on.

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URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Users\D20800.00+\D20950.01 Santa Ana Metro East MU\Air Quality\Volumeroject Name: D20950.01 Santa Ana MU Overlay Construction with low-VOC paint Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 *** TOTALS (lbs/day,unmitigated) TOTALS (lbs/day, mitigated)	ROG 54.58 54.58	NOx 347.70 347.70	CO 454.54 454.54	SO2 0.09 0.09	PM10 TOTAL 63.70 46.70	PM10 EXHAUST 13.67 13.67	PM10 DUST 50.03 33.03
*** 2008 *** TOTALS (lbs/day,unmitigated) TOTALS (lbs/day, mitigated)	ROG 564.34 564.34	NOx 487.73 487.73	CO 693.42 693.42	SO2 0.00 0.00	PM10 TOTAL 17.60 17.60	PM10 EXHAUST 17.04 17.04	PM10 DUST 0.56 0.56
*** 2009 *** TOTALS (lbs/day,unmitigated) TOTALS (lbs/day, mitigated)	ROG 53.82 53.82	NOx 319.26 319.26	CO 457.48 457.48	SO2 0.00 0.00	PM10 TOTAL 10.59 10.59	PM10 EXHAUST 10.32 10.32	PM10 DUST 0.27 0.27

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URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Users\D20800.00+\D20950.01 Santa Ana Metro East MU\Air Quality\Volumerold Project Name: D20950.01 Santa Ana MU Overlay Construction with low-VOC paint Project Location: South Coast Air Basin (Los Angeles area) On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 *** TOTALS (lbs/day,unmitigated) TOTALS (lbs/day, mitigated)	ROG 54.58 54.58	NOx 347.70 347.70	CO 454.54 454.54	SO2 0.09 0.09	PM10 TOTAL 63.70 46.70	PM10 EXHAUST 13.67 13.67	PM10 DUST 50.03 33.03
					PM10	PM10	PM10
*** 2008 ***	ROG	NOx	CO	SO2	TOTAL	EXHAUST	DUST
TOTALS (lbs/day,unmitigated)	564.34	487.73	693.42	0.00	17.60	17.04	0.56
TOTALS (lbs/day, mitigated)	564.34	487.73	693.42	0.00	17.60	17.04	0.56
					PM10	PM10	PM10
*** 2009 ***	ROG	NOx	CO	SO2	TOTAL	EXHAUST	DUST
TOTALS (lbs/day,unmitigated)	53.82	319.26	457.48	0.00	10.59	10.32	0.27
TOTALS (1bs/day, mitigated)	53.82	319.26	457.48	0.00	10.59	10.32	0.27

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URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Users\D20800.00+\D20950.01 Santa Ana Metro East MU\Air Quality\Volu Project Name: D20950.01 Santa Ana MU Overlay Construction with low-VOC paint Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Tons/Year)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 *** TOTALS (tpy, unmitigated) TOTALS (tpy, mitigated)	ROG 1.70 1.70	NOx 11.32 11.32	CO 14.08 14.08	SO2 0.00 0.00	PM10 TOTAL 1.69 1.32	PM10 EXHAUST 0.43 0.43	PM10 DUST 1.26 0.89
*** 2008 *** TOTALS (tpy, unmitigated) TOTALS (tpy, mitigated)	ROG 12.74 12.74	NOx 44.94 44.94	CO 62.76 62.76	SO2 0.00 0.00	PM10 TOTAL 1.64 1.64	PM10 EXHAUST 1.60 1.60	PM10 DUST 0.04 0.04
*** 2009 *** TOTALS (tpy, unmitigated) TOTALS (tpy, mitigated)	ROG 0.59 0.59	NOx 3.51 3.51	CO 5.03 5.03	SO2 0.00 0.00	PM10 TOTAL 0.11 0.11	PM10 EXHAUST 0.11 0.11	PM10 DUST 0.00 0.00

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URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Users\D20800.00+\D20950.01 Santa Ana Metro East MU\Air Quality\Volu
Project Name: D20950.01 Santa Ana MU Overlay Construction with low-VOC paint
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Pounds/Day - Winter)

Construction Start Month and Year: October, 2007 Construction Duration: 18 Total Land Use Area to be Developed: 15 acres Maximum Acreage Disturbed Per Day: 5 acres Single Family Units: 0 Multi-Family Units: 500 Retail/Office/Institutional/Industrial Square Footage: 230000

Retail/Office/Institutional/	'Industrial	Square Fo	otage: 2300	00			
CONSTRUCTION EMISSION ESTIMA	TES UNMITI	GATED (1bs	/day)				
					PM10	PM10	PM10
Source *** 2007***	ROG	NOx	CO	S02	TOTAL	EXHAUST	DUST
	ons						
Phase 1 - Demolition Emissic Fugitive Dust	_	-	-	-	14.31	-	14.31
Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	43.35	282.96	355.62	-	11.20	11.20	0.00
On-Road Diesel	2.24	49.56	8.35 7.16	0.09	1.15	0.95	0.20
Worker Trips	0.28	0.73	371.13	0.00	0.04 26.70	0.01 12.16	0.03 14.54
				0.09	26.70	12.10	14.54
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	ions						
Fugitive Dust	-	-	-	-	50.00	-	50.00
Off-Road Diesel	54.40	347.60	452.39		13.67	13.67	0.00
Un-Koad Diesel Worker Trine	0.00	0.00	2 15	0.00	0.00	0.00	0.00
Maximum lbs/day	54 58	347 70	454 54	0.00	63.70	13.67	50.03
Tanzman 2007 day	01.00	317.70	101101	0.00	03.70	10.07	50.05
Phase 3 - Building Construct							
Bldg Const Off-Road Diesel	0.00	0.00	0.00		0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings United Trins	0.00	0.00		0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00		-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Off-Gas Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Road Diesel Asphalt On-Road Diesel Asphalt Worker Trips Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	54.58	347.70	454.54	0.09	63.70	13.67	50.03
*** 2008*** Phase 1 - Demolition Emission							
		_	_	_	0.00	_	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emiss							
Fugitive Dust	_	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Off-Road Diesel On-Road Diesel Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum ibs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construct							
Bldg Const Off-Road Diesel	52.54	326.45	439.10		11.70	11.70	0.00
Bldg Const Worker Trips	1.40	0.81	17.17	0.00	0.29	0.02	0.27
Arch Coatings Ull-Gas	1 40	0.81	17 17	0.00	0.29	0.02	0.27
Bldg Const Worker Trips Arch Coatings Off-Gas Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Road Diesel	0.60	-			- 0.23	-	- 0.27
Asphalt Off-Road Diesel	25.94	157.42	218.35	-	5.26	5.26	0.00
Asphalt On-Road Diesel	0.12	2.19	0.42	0.00	0.05	0.05	0.00
Asphalt On-Road Diesel Asphalt Worker Trips Maximum lbs/day	0.10	0.06	1.20	0.00	0.02	0.00 17.04	0.02
Maximum ibs/day	564.34	487.73	693.42	0.00	17.60	1/.04	0.56
Max lbs/day all phases	564.34	487.73	693.42	0.00	17.60	17.04	0.56

*** 2009***

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Fugitive Du	Demolition Emissions ast Lesel esel os Lbs/day	- 0.00 0.00 0.00 0.00	- 0.00 0.00 0.00 0.00	- 0.00 0.00 0.00 0.00	- 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	- 0.00 0.00 0.00 0.00
Phase 2 - S Fugitive Du Off-Road Di On-Road Die Worker Trip Maximum 1	site Grading Emissio ust .esel ssel us .bs/day	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	- 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
Bldg Const Bldg Const Arch Coatin Arch Coatin Asphalt Off Asphalt Off Asphalt On- Asphalt Wor Maximum 1	Nullding Constructio Off-Road Diesel Worker Trips ugs Off-Gas ugs Worker Trips -Gas -Road Diesel -Road Diesel -ker Trips -bs/day	52.54 1.27 0.00 0.00 0.00 0.00 0.00 0.00 53.82	318.52 0.74 - 0.00 - 0.00 0.00 0.00 319.26	441.64 15.84 - 0.00 - 0.00 0.00 0.00 457.48	0.00 - 0.00 - - 0.00 0.00 0.00	10.31 0.29 - 0.00 - 0.00 0.00 0.00 10.59	10.31 0.02 - 0.00 - 0.00 0.00 0.00 0.00
Phase 1 - I Start Month Phase 1 Dur Building Vc On-Road Tru Off-Road Ec No. T 2 2 C 8 8 C 3 3 C	Demolition Assumption in the control of the control	ns Oct '07 eet): 750 eet): 340 93 saws Equip	0000 080 Hor	sepower 84	Load Factor 0.730 0.430 0.490 0.620 0.465	Hou	
Start Month Phase 2 Dur On-Road Tru Off-Road Ed No. I		Nov '07	Hor		Load Factor 0.580 0.490 0.620 0.660 0.465	Hou	rs/Day 8.0 8.0 5.0 8.0 8.0
Start Month Phase 3 Dur Start Mor SubPhase Off-Road No. 7 10 10 4 4 4 7 6 1 Start Mor SubPhase Start Mor SubPhase Acres to Off-Road	suilding Constructio i/Year for Phase 3: ration: 15 months th/Year for SubPhas Building Duration: Equipment Equipment Sype Tranes Stranes Stranes Stranes Stranes Stranes Stranes Stranes Architectural Coati th/Year for SubPhas Architectural Coati th/Year for SubPhas Asphalt Duration: 1 be Paved: 5 Equipment Sype Stranes Stran	Jan '08 e Buildin 13 months fts hoes e Archite ngs Durat e Asphalt months	ectural Co	sepower 190 417 190 94 79 atings: De	Load Factor 0.430 0.490 0.620 0.475 0.465 ac '08		8.0 8.0 5.0 8.0 8.0 8.0
2 C 4 F	off Highway Trucks Other Equipment Pavers			190 132	0.620 0.590		5.0 8.0

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0.00 0.00 0.00 0.00 0.00

0.00 0.27 -0.00 -0.00 0.00 0.00 0.27

0.27

4 Rollers			114	0.430		8.0	
CONSTRUCTION EMISSION ESTIMA	ATES MITIGA	TED (lbs/d	lay)				
Source *** 2007***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007*** Phase 1 - Demolition Emissic Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	ons _	_	_	_	14.31	_	14.31
Off-Road Diesel	43.35	282.96	355.62	_	11.20	11.20 0.95 0.01 12.16	0.00
On-Road Diesel Worker Trips	0.28	49.56	8.35 7.16	0.09	0.04	0.95	0.20
Maximum lbs/day	45.87	333.25	371.13	0.09	26.70	12.16	14.54
Dhara 2 Cita Cardina Baile							
Finase Z - Site Grading Emis: Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	- 	247 60	452.20	-	33.00	12 67	33.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.18	0.10	2.15	0.00	0.03	0.00	0.03
Maximum lbs/day	54.58	347.70	454.54	0.00	46.70	13.67	33.03
Phase 3 - Building Construct	ion	0.00	0.00		0.00	0.00	0.00
Bldg Const UII-Koad Diesel Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	
Arch Coatings Worker Trips Asphalt Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construct Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Off-Gas Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Road Diesel Asphalt On-Road Diesel Asphalt Worker Trips Maximum lbs/day Max lbs/day all phases	54.58	347.70	454.54	0.09	46.70	13.67	33.03
*** 2008***							
Phase 1 - Demolition Emission	ons						
Fugitive Dust	0.00	0 00	0.00	_	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emiss	ions						0.00
Off-Road Diesel	0.00	0.00	0.00	_	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	0.00	0.00 0.00 0.00 0.00	0.00	0.00 0.00 0.00	0.00	0.00 0.00 0.00 0.00	0.00
Bldg Const Off-Road Diesel	52.54	326.45	439.10	- 0.00	11.70	11.70	0.00
Arch Coatings Off-Gas	482.25	0.01	17.17	-	0.29	0.02	0.27
Arch Coatings Worker Trips	1.40	0.81	17.17	0.00	0.29	0.02	0.27
Asphalt Off-Road Diesel	25.94	157.42	218.35	-	5.26	5.26	0.00
Asphalt On-Road Diesel	0.12	2.19	0.42	0.00	0.05	0.05	0.00
Phase 3 - Building Construct Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Off-Gas Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Road Diesel Asphalt On-Road Diesel Asphalt Worker Trips Maximum lbs/day	564.34	487.73	693.42	0.00	17.60	17.04	0.02
Max lbs/day all phases						17.04	
*** 2009***							
Phase 1 - Demolition Emissic	ons						
Fugitive Dust	0 00	0 00	0.00	_	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00 0.00 0.00 0.00	0.00
Phase 2 - Site Grading Emiss							0.00
Fugitive Dust Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	0.00	0.00	0.00 0.00 0.00 0.00	0.00	0.00	0.00 0.00 0.00 0.00	0.00
1 1 1 2 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							

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Phase 3 - Building Construct	ion						
Bldg Const Off-Road Diesel	52.54	318.52	441.64	-	10.31	10.31	0.00
Bldg Const Worker Trips	1.27	0.74	15.84	0.00	0.29	0.02	0.27
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	53.82	319.26	457.48	0.00	10.59	10.32	0.27
Max lbs/day all phases	53.82	319.26	457.48	0.00	10.59	10.32	0.27

Construction-Related Mitigation Measures

Rollers

Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 34.0%) Phase 1 - Demolition Assumptions Start Month/Year for Phase 1: Oct '07 Phase 1 Duration: 1 months Building Volume Total (cubic feet): 750000 Building Volume Daily (cubic feet): 34080 On-Road Truck Travel (VMT): 1893 Off-Road Equipment Load Factor Hours/Day Type Concrete/Industrial saws Horsepower No. 0.730 Cranes Crushing/Processing Equip 190 8.0 154 0.780 417 190 Off Highway Trucks 0.490 Other Equipment Tractor/Loaders/Backhoes 0.620 4.0 Phase 2 - Site Grading Assumptions Start Month/Year for Phase 2: Nov '07 Phase 2 Duration: 2 months On-Road Truck Travel (VMT): 0 Off-Road Equipment Hours/Day No. Type Excavators Horsepower Load Factor 180 0.580 8.0 Off Highway Trucks Other Equipment 417 190 0.490 8.0 0.620 Scrapers Tractor/Loaders/Backhoes 0.660 0.465 8.0 Phase 3 - Building Construction Assumptions Start Month/Year for Phase 3: Jan '08 Phase 3 Duration: 15 months Start Month/Year for SubPhase Building: Jan '08 SubPhase Building Duration: 13 months Off-Road Equipment Type No. Horsenower Load Factor Hours/Day 0.430 190 8.0 Off Highway Trucks 417 190 0.490 Other Equipment Rough Terrain Forklifts 0.620 5.0 94 0.475 8.0 6 Tractor/Loaders/Backhoes 79 0.465 Start Month/Year for SubPhase Architectural Coatings: Dec '08 SubPhase Architectural Coatings Duration: 1 months Start Month/Year for SubPhase Asphalt: Dec '08 SubPhase Asphalt Duration: 1 months Acres to be Paved: 5 Off-Road Equipment Type Off Highway Trucks Horsepower Load Factor Hours/Day 417 190 0.490 8.0 Other Equipment 5.0 Pavers 0.590

114

0.430

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths
Architectural Coatings: # ROG/ft2 (residential) changed from 0.0185 to 0.0066
Architectural Coatings: # ROG/ft2 (non-res) changed from 0.0185 to 0.0066
Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily
has been changed from off to on.

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URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Users\D20800.00+\D20950.01 Santa Ana Metro East MU\Air Quality\Volumeroject Name: D20950.01 Santa Ana MU Overlay Construction with low-VOC paint Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Pounds/Day - Summer)

Construction Start Month and Year: October, 2007 Construction Duration: 18 Total Land Use Area to be Developed: 15 acres Maximum Acreage Disturbed Per Day: 5 acres Single Family Units: 0 Multi-Family Units: 500 Retail/Office/Institutional/Industrial Square Footage: 230000

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

					PM10	PM10	PM10
Source	ROG	NOx	CO	SO2	TOTAL	EXHAUST	DUST
*** 2007***							
Phase 1 - Demolition Emissic	ns						
Fugitive Dust	-	-	-	-	14.31	-	14.31
	43.35	282.96	355.62	-	11.20	11.20	0.00
On-Road Diesel	2.24	49.56	8.35	0.09	1.15	0.95	0.20
Worker Trips	0.28	0.73	7.16	0.00	0.04	0.01	0.03
Maximum lbs/day	45.87	333.25	371.13	0.09	26.70	12.16	14.54
Phase 2 - Site Grading Emiss							
Fugitive Dust	ions	_		_	50.00	_	50.00
Off-Road Diesel	54.40	347.60	452.39	_	13.67	13.67	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.18	0.10	2.15	0.00	0.03	0.00	0.03
Maximum lbs/day	54.58	347.70	454.54	0.00	63.70	13.67	50.03
Phase 3 - Building Construct	ion						
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00		0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	54.58	347.70	454.54	0.09	63.70	13.67	50.03
*** 2008***							
Phase 1 - Demolition Emission	ns						
Fugitive Dust	_	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips							
	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-	0.00						
Phase 2 - Site Grading Emiss	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emiss	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel	0.00 sions - 0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel On-Road Diesel	0.00 ions - 0.00 0.00	0.00	0.00 - 0.00 0.00	0.00	0.00 0.00 0.00 0.00	0.00 - 0.00 0.00	0.00 0.00 0.00 0.00
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips	0.00 ions - 0.00 0.00 0.00	0.00 - 0.00 0.00 0.00	0.00 - 0.00 0.00 0.00	0.00	0.00 0.00 0.00 0.00 0.00	0.00 - 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel On-Road Diesel	0.00 ions - 0.00 0.00	0.00	0.00 - 0.00 0.00	0.00	0.00 0.00 0.00 0.00	0.00 - 0.00 0.00	0.00 0.00 0.00 0.00
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips	0.00 sions - 0.00 0.00 0.00 0.00	0.00 - 0.00 0.00 0.00	0.00 - 0.00 0.00 0.00	0.00	0.00 0.00 0.00 0.00 0.00	0.00 - 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	0.00 sions - 0.00 0.00 0.00 0.00	0.00 - 0.00 0.00 0.00	0.00 - 0.00 0.00 0.00	0.00	0.00 0.00 0.00 0.00 0.00	0.00 - 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day Phase 3 - Building Construct	0.00 sions - 0.00 0.00 0.00 0.00 0.00	0.00 - 0.00 0.00 0.00 0.00	0.00 - 0.00 0.00 0.00 0.00	0.00 - 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day Phase 3 - Building Construct Bldg Const Off-Road Diesel	0.00 0.00 0.00 0.00 0.00 0.00 ion 52.54 1.40 482.25	0.00 - 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 - 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 11.70 0.02	0.00 0.00 0.00 0.00 0.00 0.00
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day Phase 3 - Building Construct Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Worker Trips Arch Coatings Worker Trips	0.00 0.00 0.00 0.00 0.00 0.00 ion 52.54 1.40 482.25 1.40	0.00 0.00 0.00 0.00 0.00 0.00 326.45 0.81	0.00 0.00 0.00 0.00 0.00	0.00 - 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 11.70 0.29 - 0.29	0.00 0.00 0.00 0.00 0.00 11.70 0.02	0.00 0.00 0.00 0.00 0.00
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum Ibs/day Phase 3 - Building Construct Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Off-Gas Arch Coatings Worker Trips Asphalt Off-Gas	0.00 0.00 0.00 0.00 0.00 0.00 ion 52.54 1.40 482.25 1.40 0.60	0.00 0.00 0.00 0.00 0.00 0.00 326.45 0.81	0.00 - 0.00 0.00 0.00 0.00 17.17 - 17.17	0.00 - 0.00 0.00 0.00 - 0.00 - 0.00	0.00 0.00 0.00 0.00 0.00 0.00 11.70 0.29 -	0.00 0.00 0.00 0.00 0.00 11.70 0.02 -	0.00 0.00 0.00 0.00 0.00 0.00 0.27 -
Phase 2 - Site Grading Emiss Fugitive Dust off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day Phase 3 - Building Construct Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Worker Trips Asphalt Off-Gas Asphalt off-Gas Diesel	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 0.00 0.00 0.00 0.00 0.00 326.45 0.81 - 0.81 -	0.00 - 0.00 0.00 0.00 0.00 17.17 - 17.17 - 218.35	0.00 - 0.00 0.00 0.00 - 0.00 -	0.00 0.00 0.00 0.00 0.00 0.00 11.70 0.29 - 0.29 - 5.26	0.00 	0.00 0.00 0.00 0.00 0.00 0.00 0.27 - 0.27 - 0.27
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day Phase 3 - Building Construct Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Off-Gas Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Gad Diesel Asphalt On-Road Diesel	0.00 0.00 0.00 0.00 0.00 0.00 ion 52.54 1.40 482.25 1.40 0.60 25.94 0.12	0.00 - 0.00 0.00 0.00 0.00 326.45 0.81 - 0.81 157.42 2.19	0.00 -0.00 0.00 0.00 0.00 17.17 -17.17 -17.17 -218.35 0.42	0.00 	0.00 0.00 0.00 0.00 0.00 0.00 0.29 - 5.26 0.05	0.00 - 0.00 0.00 0.00 0.00 0.00 - 11.70 0.02 - 0.02 - 5.26 0.05	0.00 0.00 0.00 0.00 0.00 0.00 0.27
Phase 2 - Site Grading Emiss Fugitive Dust off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day Phase 3 - Building Construct Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Gad Diesel Asphalt On-Road Diesel Asphalt On-Road Diesel Asphalt Worker Trips	0.00 cions 0.00 0.00 0.00 0.00 ion 52.54 1.40 482.25 1.40 0.60 25.94 0.12 0.10	0.00 -0.00 0.00 0.00 0.00 326.45 0.81 -0.81 -157.42 2.19 0.06	0.00 - 0.00 0.00 0.00 0.00 17.17 - 17.17 - 218.35 0.42 1.20	0.00 	0.00 0.00 0.00 0.00 0.00 0.00 11.70 0.29 - 0.29 - 5.26 0.05 0.02	0.00 - 0.00 0.00 0.00 0.00 0.00 11.70 0.02 - 0.02 - 5.26 0.05 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.27 - 0.27 - 0.00 0.00
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day Phase 3 - Building Construct Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Off-Gas Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Gad Diesel Asphalt On-Road Diesel	0.00 0.00 0.00 0.00 0.00 0.00 ion 52.54 1.40 482.25 1.40 0.60 25.94 0.12	0.00 - 0.00 0.00 0.00 0.00 326.45 0.81 - 0.81 157.42 2.19	0.00 -0.00 0.00 0.00 0.00 17.17 -17.17 -17.17 -218.35 0.42	0.00 	0.00 0.00 0.00 0.00 0.00 0.00 0.29 - 5.26 0.05	0.00 - 0.00 0.00 0.00 0.00 0.00 - 11.70 0.02 - 0.02 - 5.26 0.05	0.00 0.00 0.00 0.00 0.00 0.00 0.27
Phase 2 - Site Grading Emiss Fugitive Dust off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day Phase 3 - Building Construct Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Gad Diesel Asphalt On-Road Diesel Asphalt On-Road Diesel Asphalt Worker Trips	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	0.00 -0.00 0.00 0.00 0.00 326.45 0.81 -0.81 -157.42 2.19 0.06	0.00 - 0.00 0.00 0.00 0.00 17.17 - 17.17 - 218.35 0.42 1.20	0.00 	0.00 0.00 0.00 0.00 0.00 0.00 11.70 0.29 - 0.29 - 5.26 0.05 0.02	0.00 - 0.00 0.00 0.00 0.00 0.00 11.70 0.02 - 0.02 - 5.26 0.05 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.27 - 0.27 - 0.00 0.00

^{*** 2009***}

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Phase 1 - Demolition Emissions Fugitive Dust 0 - 0 - 0 - 0 - 0.00 Off-Road Diesel 0 .00								
Phase 2 - Site Grading Emissions Fugitive Dust	Phase 1 -	- Demolition Emission	ns –	_	_	_	0.00	_
Phase 2 - Site Grading Emissions Fugitive Dust	Off-Road	Diesel	0.00	0.00	0.00	-	0.00	0.00
Phase 2 - Site Grading Emissions Fugitive Dust	On-Road I	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions Fugitive Dust	Worker Ti	rips	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road Diesel	Maximun	ii ibs/day	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road Diesel	Phase 2 -	- Site Grading Emiss:	ions				0.00	
Phase 3 - Building Construction Bldg Const Off-Road Diesel 52.54 318.52 441.64 - 10.31 10.3 Bldg Const Worker Trips 1.27 0.74 15.84 0.00 0.29 0.0 Arch Coatings Off-Gas 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Arch Coatings Off-Gas 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Arch Coatings Off-Gas 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Arch Coatings Off-Gas 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Arch Coatings Off-Gas 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Arch Coatings Off-Gas 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Asphalt Off-Road Diesel 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Asphalt Off-Road Diesel 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Asphalt Worker Trips 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Maximum lbs/day 53.82 319.26 457.48 0.00 10.59 10.3 Max lbs/day all phases 53.82 319.26 457.48 0.00 10.59 10.3 Phase 1 - Demolition Assumptions Start Month/Year for Phase 1: Oct '07 Phase 1 Duration: 1 months Building Volume Daily (cubic feet): 34080 On-Road Truck Travel (VMT): 1893 Off-Road Equipment No. Type 1	Off-Road	Diesel	0.00	0.00	0.00	_	0.00	0.00
Phase 3 - Building Construction Bldg Const Off-Road Diesel 52.54 318.52 441.64 - 10.31 10.3 Bldg Const Worker Trips 1.27 0.74 15.84 0.00 0.29 0.0 Arch Coatings Off-Gas 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Arch Coatings Off-Gas 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Arch Coatings Off-Gas 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Arch Coatings Off-Gas 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Arch Coatings Off-Gas 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Arch Coatings Off-Gas 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Asphalt Off-Road Diesel 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Asphalt Off-Road Diesel 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Asphalt Worker Trips 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Maximum lbs/day 53.82 319.26 457.48 0.00 10.59 10.3 Max lbs/day all phases 53.82 319.26 457.48 0.00 10.59 10.3 Phase 1 - Demolition Assumptions Start Month/Year for Phase 1: Oct '07 Phase 1 Duration: 1 months Building Volume Daily (cubic feet): 34080 On-Road Truck Travel (VMT): 1893 Off-Road Equipment No. Type 1	On-Road I	Diesel	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction Bldg Const Off-Road Diesel 52.54 318.52 441.64 - 10.31 10.3 Bldg Const Worker Trips 1.27 0.74 15.84 0.00 0.29 0.0 Arch Coatings Off-Gas 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Arch Coatings Off-Gas 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Arch Coatings Off-Gas 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Arch Coatings Off-Gas 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Arch Coatings Off-Gas 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Arch Coatings Off-Gas 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Asphalt Off-Road Diesel 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Asphalt Off-Road Diesel 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Asphalt Worker Trips 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Maximum lbs/day 53.82 319.26 457.48 0.00 10.59 10.3 Max lbs/day all phases 53.82 319.26 457.48 0.00 10.59 10.3 Phase 1 - Demolition Assumptions Start Month/Year for Phase 1: Oct '07 Phase 1 Duration: 1 months Building Volume Daily (cubic feet): 34080 On-Road Truck Travel (VMT): 1893 Off-Road Equipment No. Type 1	Worker Tr	rips	0.00	0.00	0.00	0.00	0.00	0.00
Phase 1 - Demolition Assumptions Start Month/Year for Phase 1: Oct '07 Phase 1 Duration: 1 months Building Volume Total (cubic feet): 750000 Building Volume Daily (cubic feet): 34080 On-Road Truck Travel (VMT): 1893 Off-Road Equipment No. Type								
Phase 1 - Demolition Assumptions Start Month/Year for Phase 1: Oct '07 Phase 1 Duration: 1 months Building Volume Total (cubic feet): 750000 Building Volume Daily (cubic feet): 34080 On-Road Truck Travel (VMT): 1893 Off-Road Equipment No. Type	Phase 3 -	- Building Construct:	ion					
Phase 1 - Demolition Assumptions Start Month/Year for Phase 1: Oct '07 Phase 1 Duration: 1 months Building Volume Total (cubic feet): 750000 Building Volume Daily (cubic feet): 34080 On-Road Truck Travel (VMT): 1893 Off-Road Equipment No. Type	Bldg Cons	st Off-Road Diesel	52.54	318.52	441.64		10.31	10.31
Phase 1 - Demolition Assumptions Start Month/Year for Phase 1: Oct '07 Phase 1 Duration: 1 months Building Volume Total (cubic feet): 750000 Building Volume Daily (cubic feet): 34080 On-Road Truck Travel (VMT): 1893 Off-Road Equipment No. Type	Bldg Cons	st Worker Trips	1.27	0.74	15.84	0.00	0.29	0.02
Phase 1 - Demolition Assumptions Start Month/Year for Phase 1: Oct '07 Phase 1 Duration: 1 months Building Volume Total (cubic feet): 750000 Building Volume Daily (cubic feet): 34080 On-Road Truck Travel (VMT): 1893 Off-Road Equipment No. Type	Arch Coat	ings Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00
Phase 1 - Demolition Assumptions Start Month/Year for Phase 1: Oct '07 Phase 1 Duration: 1 months Building Volume Total (cubic feet): 750000 Building Volume Daily (cubic feet): 34080 On-Road Truck Travel (VMT): 1893 Off-Road Equipment No. Type	Arch Coat	.ings worker irips	0.00	0.00	0.00	0.00	0.00	0.00
Phase 1 - Demolition Assumptions Start Month/Year for Phase 1: Oct '07 Phase 1 Duration: 1 months Building Volume Total (cubic feet): 750000 Building Volume Daily (cubic feet): 34080 On-Road Truck Travel (VMT): 1893 Off-Road Equipment No. Type	Asphalt (Off-Road Diesel	0.00	0.00	0.00	_	0 00	0.00
Phase 1 - Demolition Assumptions Start Month/Year for Phase 1: Oct '07 Phase 1 Duration: 1 months Building Volume Total (cubic feet): 750000 Building Volume Daily (cubic feet): 34080 On-Road Truck Travel (VMT): 1893 Off-Road Equipment No. Type	Asphalt 0	On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00
Phase 1 - Demolition Assumptions Start Month/Year for Phase 1: Oct '07 Phase 1 Duration: 1 months Building Volume Total (cubic feet): 750000 Building Volume Daily (cubic feet): 34080 On-Road Truck Travel (VMT): 1893 Off-Road Equipment No. Type	Asphalt W	Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00
Phase 1 - Demolition Assumptions Start Month/Year for Phase 1: Oct '07 Phase 1 Duration: 1 months Building Volume Total (cubic feet): 750000 Building Volume Daily (cubic feet): 34080 On-Road Truck Travel (VMT): 1893 Off-Road Equipment No. Type	Maximum	n lbs/day	53.82	319.26	457.48	0.00	10.59	10.32
Phase 1 - Demolition Assumptions Start Month/Year for Phase 1: Oct '07 Phase 1 Duration: 1 months Building Volume Daily (cubic feet): 750000 Building Volume Daily (cubic feet): 34080 On-Road Truck Travel (VMT): 1893 Off-Road Equipment No. Type	Max 1bs	s/day all phases	53.82	319.26	457.48	0.00	10.59	10.32
Start Month/Year for Phase 1: Oct '07								
Phase 2 - Site Grading Assumptions Start Month/Year for Phase 2: Nov '07 Phase 2 Duration: 2 months On-Road Truck Travel (VMT): 0 Off-Road Equipment No. Type	Off-Road No. 1	Equipment Type Concrete/Industria	l saws	F	lorsepower 84 190 154 417 190 79	Load Factor 0.730 0.430 0.780 0.490 0.620 0.465	Hou	rs/Day 8.0 8.0 8.0 8.0 4.0
Phase 3 - Building Construction Assumptions Start Month/Year for Phase 3: Jan '08 Phase 3 Duration: 15 months Start Month/Year for SubPhase Building: Jan '08 SubPhase Building Duration: 13 months Off-Road Equipment No. Type	Start Mor Phase 2 I On-Road 1	nth/Year for Phase 2 Duration: 2 months Truck Travel (VMT): (: Nov '07	F	lorsepower	Load Factor	Hou	rs/Day
Phase 3 - Building Construction Assumptions Start Month/Year for SubPhase Building: Jan '08 Phase 3 Duration: 15 months Start Month/Year for SubPhase Building: Jan '08 SubPhase Building Duration: 13 months Off-Road Equipment No. Type	6	Off Highway Trucks			417	0.490		8.0
Phase 3 - Building Construction Assumptions Start Month/Year for SubPhase Building: Jan '08 Phase 3 Duration: 15 months Start Month/Year for SubPhase Building: Jan '08 SubPhase Building Duration: 13 months Off-Road Equipment No. Type	4	Other Equipment			190	0.620		5.0
Phase 3 - Building Construction Assumptions Start Month/Year for SubPhase Building: Jan '08 Phase 3 Duration: 15 months Start Month/Year for SubPhase Building: Jan '08 SubPhase Building Duration: 13 months Off-Road Equipment No. Type	5	Scrapers			313	0.660		8.0
No. Type	Phase 3 - Start Mor Phase 3 I Start N SubPhas	- Building Construct: hth/Year for Phase 3 Duration: 15 months Month/Year for SubPhase Building Duration	ion Assump : Jan '08 ase Buildi	ng: Jan		0.465		0.0
SubPhase Architectural Coatings Duration: 1 months Start Month/Year for SubPhase Asphalt: Dec '08 SubPhase Asphalt Duration: 1 months Acres to be Paved: 5 Off-Road Equipment	Off-Roa	ad Equipment					**	(5)
SubPhase Architectural Coatings Duration: 1 months Start Month/Year for SubPhase Asphalt: Dec '08 SubPhase Asphalt Duration: 1 months Acres to be Paved: 5 Off-Road Equipment	No.	Type		F	lorsepower	Load Factor	Hou	rs/Day
SubPhase Architectural Coatings Duration: 1 months Start Month/Year for SubPhase Asphalt: Dec '08 SubPhase Asphalt Duration: 1 months Acres to be Paved: 5 Off-Road Equipment	10	Off Highway Trucks			417	0.430		8.0
SubPhase Architectural Coatings Duration: 1 months Start Month/Year for SubPhase Asphalt: Dec '08 SubPhase Asphalt Duration: 1 months Acres to be Paved: 5 Off-Road Equipment	4	Other Equipment			190	0.620		5.0
SubPhase Architectural Coatings Duration: 1 months Start Month/Year for SubPhase Asphalt: Dec '08 SubPhase Asphalt Duration: 1 months Acres to be Paved: 5 Off-Road Equipment	4	Rough Terrain Fork	lifts		94	0.475		8.0
SubPhase Architectural Coatings Duration: 1 months Start Month/Year for SubPhase Asphalt: Dec '08 SubPhase Asphalt Duration: 1 months Acres to be Paved: 5 Off-Road Equipment	6	Tractor/Loaders/Bac	ckhoes		79	0.465		8.0
Start Month/Year for SubPhase Asphalt: Dec '08 SubPhase Asphalt Duration: 1 months Acres to be Paved: 5 Off-Boad Equipment	SCALCI	JOHEH TEAT TOT DUDING	ase Archite	eccurar	coacings. D	ec '08		
Acres to be Paved: 5 Off-Road Equipment	SubPhas	se Architectural Coat	tings Dura	tion: 1	months			
Acres to be Paved: 5 Off-Road Equipment	SubPhas	se Asphalt Duration:	1 months	c. Dec	-			
Off-Road Equipment Horsepower Load Factor Hours/Day 4 Off Highway Trucks 417 0.490 8.0 2 Other Equipment 190 0.620 5.0	Acres t	to be Paved: 5						
No. Type Horsepower Load Factor Hours/Day 4 Off Highway Trucks 417 0.490 8.0 2 Other Equipment 190 0.620 5.0	Off-Roa	ad Equipment						
4 Off Highway Trucks 417 0.490 8.0 2 Other Equipment 190 0.620 5.0	No.	Type		F	lorsepower	Load Factor	Hou	rs/Day
2 Other Equipment 190 0.620 5.0	4	Off Highway Trucks			417	0.490		8.0
	2	Other Equipment			190	0.620		0.0

0.00 0.00 0.00 0.00

0.00 0.00 0.00 0.00

0.00 0.27

0.00 0.00 0.00 0.00 0.27 0.27

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4 Rollers			114	0.430		8.0	
CONSTRUCTION EMISSION ESTIMA	TES MITIGA	TED (lbs/d	ay)		PM10	2110	PM1.0
Source *** 2007***	ROG	NOx	CO	SO2		PM10 EXHAUST	
Phase 1 - Demolition Emissic Fugitive Dust	ns _	_	_	_	1/1 31	_	1/1 31
Off-Road Diesel	43.35	282.96	355.62		11.20	11.20	0.00
On-Road Diesel Worker Trips	2.24 0.28	49.56 0.73	8.35 7.16	0.09	1.15 0.04	0.95	0.20
Phase 1 - Demolition Emissic Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	45.87	333.25	371.13	0.09	26.70	12.16	14.54
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	ions				22.00		22.00
Off-Road Diesel	54.40	347.60	452.39	_	13.67	13.67	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	54.58	347.70	454.54	0.00	46.70	13.67	33.03
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	- 0.00	-	-	- 0.00	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Road Diesel	0.00	0.00	0.00	_	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construct Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Off-Gas Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Road Diesel Asphalt On-Road Diesel Asphalt Worker Trips Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	54.58	347.70	454.54	0.09	46.70	13.67	33.03
*** 2008***							
*** 2008*** Phase 1 - Demolition Emissic Fugitive Dust	ns				0.00		0.00
Off-Road Diesel	0.00	0.00	0.00	_	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	ions						
Fugitive Dust	0.00	0.00	0.00	-	0.00	0 00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum ibs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construct Bldg Const Off-Road Diesel	10n 52.54	326.45	439.10	_	11.70	11.70	0.00
Bldg Const Worker Trips	1.40	0.81	17.17	0.00	0.29	0.02	0.27
Arch Coatings Uff-Gas Arch Coatings Worker Trips	1.40	0.81	17.17	0.00	0.29	0.02	0.27
Asphalt Off-Gas	0.60	157.40	210 25	-	F 26	- -	- 0.00
Asphalt On-Road Diesel	0.12	2.19	0.42	0.00	0.05	0.05	0.00
Asphalt Worker Trips	0.10	0.06	1.20	0.00	0.02	0.00	0.02
Phase 3 - Building Construct Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Off-Gas Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Road Diesel Asphalt On-Road Diesel Asphalt Worker Trips Maximum lbs/day	564.34	487.73	693.42	0.00	17.60	17.04	0.56
Max lbs/day all phases	564.34	487.73	693.42	0.00	17.60	17.04	0.56
*** 2009***							
Phase 1 - Demolition Emissio	ns				0 00		0.00
Off-Road Diesel	0.00	0.00	0.00	_	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 1 - Demolition Emissic Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Maximum lbs/day	- 0.00	- 0.00	- 0.00	-	0.00	- 0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Phase 3 -	- Building Constructi	.on						
Bldg Cons	st Off-Road Diesel	52.54	318.5	2 44	11.64		10.31	10.3
	st Worker Trips ings Off-Gas	0.00	0.,	4 1	5.84	0.00	0.29	0.0
Arch Coat	ings Worker Trips	0.00	0.0		0.00	0.00	0.00	0.00
Asphalt (ings Worker Trips Off-Gas Off-Road Diesel	0.00		-	-	-	-	-
Asphalt (Off-Road Diesel	0.00	0.0	0	0.00		0.00	0.0
Asphalt (On-Road Diesel Worker Trips	0.00	0.0	0	0.00	0.00	0.00	0.0
Maximum	n lbs/day	0.00 0.00 0.00 53.82	319.2	6 45	57.48	0.00 0.00 0.00	10.59	10.3
Max 1bs	s/day all phases	53.82	319.2	6 45	7.48	0.00	10.59	10.32
Construct	ion-Related Mitigati	on Measur	es					
Dhago 2	: Soil Disturbance: W	lator owno	and aux	faces	24 4			
Percei	nt Reduction(ROG 0.0%	NOx 0.0%	CO 0.0	% SO2 (0.0% PI	M10 34.0%)		
Phase 1 -	 Demolition Assumpti 	.ons						
	nth/Year for Phase 1:	Oct '07						
	Ouration: 1 months Volume Total (cubic	feet) · 75	0000					
Building	Volume Daily (cubic	feet): 34	080					
On-Road ?	Truck Travel (VMT): 1	.893						
	Equipment						**	(D
No.	Type Concrete/Industrial	saws		Horsepo 84	ower	Load Factor 0.730	нои	rs/Day 8.0
2	Cranes			190		0.430		8.0
2	Crushing/Processing Off Highway Trucks	g Equip		154 417		0.780		8.0
8	Off Highway Trucks			417		0.490		8.0
3 5	Other Equipment Tractor/Loaders/Bac	khoee		190 79		0.620 0.465		4.0 8.0
3	IIaccoi/Loadeis/Bac	knoes		15		0.405		0.0
	- Site Grading Assump							
	nth/Year for Phase 2:	Nov '07						
	Ouration: 2 months Fruck Travel (VMT): 0	,						
	Equipment	,						
No.	Type			Horsepo		Load Factor		rs/Day
3	Excavators			180		0.580		8.0
6 4	Off Highway Irucks			417 190		0.490		8.0 5.0
5	Off Highway Trucks Other Equipment Scrapers			313		0.660		8.0
6	Tractor/Loaders/Bac	khoes		79		0.465		8.0
Db 2	- Building Constructi	3						
	th/Year for Phase 3:		LIONS					
Phase 3 I	Ouration: 15 months							
	Month/Year for SubPha			'08				
	se Building Duration: ad Equipment	13 month	S					
	Type			Horsepo	wer	Load Factor	Hou	rs/Day
3	Cranes			190		0.430		8.0
10	Off Highway Trucks			417		0.490		8.0
4	Other Equipment Rough Terrain Forkl	i ft o		190 94		0.620 0.475		5.0 8.0
6	Tractor/Loaders/Bac			79		0.475		8.0
	Month/Year for SubPha		ectural					0.0
SubPhas	se Architectural Coat	ings Dura	tion: 1	months	3			
Start 1	Month/Year for SubPha se Asphalt Duration:	se Asphal	t: Dec	'08				
Acres t	se Asphalt Duration: to be Paved: 5	1 MONTHS						
	ad Equipment							
No.	Type			Horsepo		Load Factor		rs/Day
4	Off Highway Trucks			417 190		0.490		8.0 5.0
Z 4	Other Equipment Pavers			132		0.520		8.0
4	Rollers			114		0.430		8.0

0.00 0.27 -0.00 -0.00 0.00 0.00 0.27

0.27

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths
Architectural Coatings: # ROG/ft2 (residential) changed from 0.0185 to 0.0066
Architectural Coatings: # ROG/ft2 (non-res) changed from 0.0185 to 0.0066
Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily
has been changed from off to on.

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URBEMIS 2002 For Windows 8.7.0

P:\Projects - All Users\D20800.00+\D20950.01 Santa Ana Metro East MU\Air Quality\Volu D20950.01 Santa Ana MU Overlay Construction with low-VOC paint South Coast Air Basin (Los Angeles area) File Name: Project Name: Project Location:

On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

Construction Start Month and Year: October, 2007 Construction Duration: 18 Total Land Use Area to be Developed: 15 acres Note: Land Use Alea Us Developed: 17 acres
Maximum Acreage Disturbed Per Day: 5 acres
Single Family Units: 0 Multi-Family Units: 500
Retail/Office/Institutional/Industrial Square Footage: 230000

CONSTRUCTION EMISSION ESTIMA:	res unmiti	GATED (ton	s/year)		PM10	PM10	PM10
Source *** 2007***	ROG	NOx	CO	SO2	TOTAL	EXHAUST	DUST
Phase 1 - Demolition Emission	0.0						
Fugitive Dust	-	_	_	_	0.16	_	0.16
Off-Road Diesel	0.48	3.11	3.91	_	0.12	0.12	0.00
On-Road Diesel	0.02	0.55	0.09	0.00	0.01	0.01	0.00
Worker Trips	0.02	0.01	0.08	0.00	0.00	0.00	0.00
Total tons/year	0.50	3.67	4.08	0.00	0.29	0.13	0.16
, 1							
Phase 2 - Site Grading Emiss:	ions						
Fugitive Dust	-	-	-	-	1.10	-	1.10
Off-Road Diesel	1.20	7.65	9.95	-	0.30	0.30	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00
Total tons/year	1.20	7.65	10.00	0.00	1.40	0.30	1.10
Phase 3 - Building Construct:	ion						
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total all phases tons/yr	1.70	11.32	14.08	0.00	1.69	0.43	1.26
*** 2008*** Phase 1 - Demolition Emission							
Fugitive Dust	.15	_	_	_	0.00	_	0.00
Off-Road Diesel	0.00	0.00	0.00	_	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
_							
Phase 2 - Site Grading Emiss:	ions						
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
rocar cono, year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construct:							
Bldg Const Off-Road Diesel	6.94	43.09	57.96		1.54	1.54	0.00
Bldg Const Worker Trips	0.18	0.09	2.20	0.00	0.04	0.00	0.04
Arch Coatings Off-Gas	5.30						
Arch Coatings Worker Trips	0.02	0.01	0.19	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.01	1 72	2 40	_	0.06	- 0.00	
Asphalt Off-Road Diesel	0.29	1.73	2.40		0.06	0.06	0.00
Asphalt On-Road Diesel	0.00	0.02	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips Total tons/year	0.00 12.74	0.00 44.94	0.01 62.76	0.00	0.00	0.00	0.00
iocai cons/year	14.74	44.74	02.70	0.00	1.04	1.00	0.04
Total all phases tons/yr	12.74	44.94	62.76	0.00	1.64	1.60	0.04

*** 2009***

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Phase 1 - Demolition Emissions Fugitive Dust Off-Road Diesel On-Road Diesel		0.00	0.00	- 0.00 0.00 0.00	0.00	0.00
Worker Trips Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emission Fugitive Dust	ns				0.00	
Off-Road Diesel	0.00	0.00	0.00	- 0.00 0.00 0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction	n					
Bldg Const Off-Road Diesel	0.58	3.50	4.86		0.11	0.11
Bldg Const Worker Trips	0.01	0.01	0.17	0.00	0.00	0.00
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0 00	0.00
Asphalt Off-Gas	0.00	-	-	0.00	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00
Asphalt Un-Koad Diesel	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construction Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Off-Gas Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Road Diesel Asphalt On-Road Diesel Asphalt Worker Trips Total tons/year	0.59	3.51	5.03	0.00	0.11	0.11
					0 11	0 11
Total all phases tons/yr	0.59	3.51	5.03	0.00	0.11	0.11
Phase 1 - Demolition Assumption Start Month/Year for Phase 1: Phase 1 Duration: 1 months Building Volume Total (cubic fulliding Volume Daily (cubic fon-Road Truck Travel (VMT): 18 off-Road Equipment	Oct '07 eet): 750					
No. Type		Hors	epower	Load Factor	Hour	s/Day
1 Concrete/Industrial	saws		84 90	0.750		
2 Cranes		1	90	0.430	8	
2 Crushing/Processing : 8 Off Highway Trucks	Equip	4	54 17	0.780	8	
3 Other Equipment		1 4 1	90	0.620	4	
5 Tractor/Loaders/Back	hoes		79	0.780 0.490 0.620 0.465	8	.0
Phase 2 - Site Grading Assumpt Start Month/Year for Phase 2: Phase 2 Duration: 2 months On-Road Truck Travel (VMT): 0 Off-Road Equipment	ions Nov '07					
No. Type 3 Excavators		Hors	epower	Load Factor	Hour	s/Day
6 Off Highway Trucks		4	80 17	0.580	8	.0
4 Other Equipment		1	90	0.620	5	.0
5 Scrapers 6 Tractor/Loaders/Back		3	13 79	0.620 0.660	8	
6 Tractor/Loaders/Back	noes		19	0.465	8	. 0
Phase 3 - Building Construction Start Month/Year for Phase 3: Phase 3 Duration: 15 months Start Month/Year for SubPhase SubPhase Building Duration: Off-Road Equipment	Jan '08 [°] e Buildin	g: Jan '08				
No. Type		Hors	epower	Load Factor	Hour	s/Day
3 Cranes		1	90	0.430	8	.0
10 Off Highway Trucks 4 Other Equipment		1	17 90	0.490	8 5	.0
4 Rough Terrain Forkli	fts	_	94	0.475 0.465	8	.0
6 Tractor/Loaders/Back	hoes		79	0.465	8	.0
Start Month/Year for SubPhase SubPhase Architectural Coati	ngs Durat	ion: 1 mon		ec '08		
Start Month/Year for SubPhase SubPhase Asphalt Duration: 1 Acres to be Paved: 5		: Dec '08				
Off-Road Equipment						-
No. Type 4 Off Highway Trucks		Hors	epower 17	Load Factor 0.490	Hour:	s/Day
2 Other Equipment		1	90	0.620	5	.0
4 Pavers		1	32	0.590	8	

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0.00 0.00 0.00 0.00 0.00

0.00 0.00 0.00 0.00 0.00

0.00 0.00 -0.00 -0.00 0.00 0.00

0.00

4 Rollers			114	0.430		8.0	
CONSTRUCTION EMISSION ESTIMA	TES MITIGA	TED (tons/	year)				
Source	ROG	NOx	CO	S02	PM10 TOTAL	PM10 EXHAUST	DUST
Phase 1 - Demolition Emissio Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Total tons/year	ns						
Fugitive Dust	0.49	2 11	2 01	_	0.16	0.12	0.16
On-Road Diesel	0.48	0.55	0.09	0.00	0.12	0.12	0.00
Worker Trips	0.00	0.01	0.08	0.00	0.00	0.00	0.00
Total tons/year	0.50	3.67	4.08	0.00	0.29	0.13	0.16
Phase 2 - Site Grading Emiss	ions						
Fugitive Dust	1 20	7 (5	0.05	-	0.73	- 20	0.73
On-Road Diesel	0.00	0.00	0.00	0 00	0.30	0.30	0.00
Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Total tons/year	1.20	7.65	10.00	0.00	1.03	0.30	0.73
Phase 3 - Building Construct	ion						
Bldg Const Off-Road Diesel	0.00	0.00	0.00	_	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Road Diesel	0.00	0 00	0 00	_	0 00	0 00	0 00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construct Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Off-Gas Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Road Diesel Asphalt On-Road Diesel Asphalt Worker Trips Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total all phases tons/yr	1.70	11.32	14.08	0.00	1.32	0.43	0.89
*** 2008***							
	ns						
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 1 - Demolition Emissio Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Total tons/year	iona						
Fugitive Dust		_	_	_	0.00	_	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
lotal tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 3 - Building Construct	ion						
Bldg Const Off-Road Diesel	6.94	43.09	57.96		1.54	1.54	0.00
Arch Coatings Off-Gas	5.30	0.09	2.20	0.00	0.04	0.00	0.04
Phase 3 - Building Construct Bldg Const Off-Road Diesel Bldg Const Worker Trips Arch Coatings Off-Gas Arch Coatings Worker Trips Asphalt Off-Gas Asphalt Off-Road Diesel Asphalt On-Road Diesel Asphalt Worker Trips Total tons/year	0.02	0.01	0.19	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.01	-		-			-
Aspnalt Off-Road Diesel	0.29	1.73	2.40	0 00	0.06	0.06	0.00
Asphalt Worker Trips	0.00	0.02	0.00	0.00	0.00	0.00	0.00
Total tons/year	12.74	44.94	62.76	0.00	1.64	1.60	0.04
Total all phases tons/yr	12.74	44.94	62.76	0.00	1.64	1.60	
*** 2009*** Phase 1 - Demolition Emissio	n a						
Final	115	_	_	_	0 00	_	0 00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 1 - Demolition Emissio Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emiss Fugitive Dust	ions						
Fugitive Dust	0.00	0 00	0 00	_	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emiss Fugitive Dust Off-Road Diesel On-Road Diesel Worker Trips Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Phase 3 - Building Construction	n						
Bldg Const Off-Road Diesel	0.58	3.50	4.86	-	0.11	0.11	0.00
Bldg Const Worker Trips	0.01	0.01	0.17	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.59	3.51	5.03	0.00	0.11	0.11	0.00
Total all phases tons/yr	0.59	3.51	5.03	0.00	0.11	0.11	0.00

Construction-Related Mitigation Measures

Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily Percent Reduction (ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 34.0%) Phase 1 - Demolition Assumptions rnase 1 - Demolition Assumptions Start Month/Year for Phase 1: Oct '07 Phase 1 Duration: 1 months Building Volume Total (cubic feet): 750000 Building Volume Daily (cubic feet): 34080 Oh-Road Truck Travel (VMT): 1893 Off-Road Equipment

II-NOAU	Equipment			
No.	Type	Horsepower	Load Factor	Hours/Day
1	Concrete/Industrial saws	8.4	0.730	8.0
2	Cranes	190	0.430	8.0
2	Crushing/Processing Equip	154	0.780	8.0
8	Off Highway Trucks	417	0.490	8.0
3	Other Equipment	190	0.620	4.0
5	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 2 - Site Grading Assumptions Start Month/Year for Phase 2: Nov '07 Phase 2 Duration: 2 months

On-Road Truck Travel (VMT): 0 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
3	Excavators	180	0.580	8.0
6	Off Highway Trucks	417	0.490	8.0
4	Other Equipment	190	0.620	5.0
5	Scrapers	313	0.660	8.0
6	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Jan '08
Phase 3 Duration: 15 months
Start Month/Year for SubPhase Building: Jan '08
SubPhase Building Duration: 13 months
Off-Pada Equipment

ULI-RO	ad Equipment			
No.	Type	Horsepower	Load Factor	Hours/Day
3	Cranes	190	0.430	8.0
10	Off Highway Trucks	417	0.490	8.0
4	Other Equipment	190	0.620	5.0
4	Rough Terrain Forklifts	94	0.475	8.0
6	Tractor/Loaders/Backhoes	79	0.465	8.0

Start Month/Year for SubPhase Architectural Coatings: Dec '08 SubPhase Architectural Coatings Duration: 1 months

Subrhase Architectural Coalings Duration: 1 mon Start Month/Year for Subrhase Asphalt: Dec '08 Subrhase Asphalt Duration: 1 months Acres to be Paved: 5 Off-Road Equipment

0.	Type	Horsepower	Load Factor	Hours/Day
4	Off Highway Trucks	417	0.490	8.0
2	Other Equipment	190	0.620	5.0
4	Pavers	132	0.590	8.0
4	Rollers	114	0.430	8.0

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths
Architectural Coatings: # ROG/ft2 (residential) changed from 0.0185 to 0.0066
Architectural Coatings: # ROG/ft2 (non-res) changed from 0.0185 to 0.0066
Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily
has been changed from off to on.

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URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Users\D20800.00+\D20950.01 Santa Ana Metro East MU\Air Quality\Volu
Project Name: D20950.01 Santa Ana MU Overlay Operation
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES	200	NOx		S02	PM10
TOTALS (lbs/day,unmitigated)	ROG 395.28	62.72	37.67	0.00	0.12
OPERATIONAL (VEHICLE) EMISSION	ESTIMATES ROG	NOx	CO	S02	PM10
TOTALS (lbs/day,unmitigated)	169.55	133.96	1,661.45	4.54	774.49
SUM OF AREA AND OPERATIONAL EM	ISSION ESTI	MATES			
TOTALS (lbs/day,unmitigated)	ROG 564.83	NOx 196.68	CO 1,699.12	SO2 4.54	PM10 774.61

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URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Users\D20800.00+\D20950.01 Santa Ana Metro East MU\Air Quality\Volu Project Name: D20995.01 Santa Ana MU Overlay Operation
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT (Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES TOTALS (lbs/day,unmitigated)	ROG 395.01	NOx 62.69	CO 35.78	SO2 0.00	PM10 0.12
OPERATIONAL (VEHICLE) EMISSION	ESTIMATES ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	144.84	192.09	1,544.10	4.05	774.49
SUM OF AREA AND OPERATIONAL EM: TOTALS (lbs/day,unmitigated)	ISSION ESTI ROG 539.85	MATES NOx 254.78	CO 1,579.89	SO2 4.06	PM10 774.61

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URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Users\D20800.0
Project Name: D20950.01 Santa Ana MU Overlay of
Project Location: South Coast Air Basin (Los Angel
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2 P:\Projects - All Users\D20800.00+\D20950.01 Santa Ana Metro East MU\Air Quality\Volu D20950.01 Santa Ana MD Overlay Operation South Coast Air Basin (Los Angeles area)

SUMMARY REPORT (Tons/Year)

ROG 65.75	NOx 11.44	CO 6.70	SO2 0.00	PM10 0.02
29.44	NOx 27.98	296.08	0.80	PM10 141.34
ISSION E	STIMATES			
ROG 95.19	NOx 39.43	CO 302.78	SO2 0.80	PM10 141.37
	ESTIMAT ROG 29.44 ISSION E ROG	65.75 11.44 ESTIMATES ROG NOx 29.44 27.98 ISSION ESTIMATES ROG NOx	65.75 11.44 6.70 ESTIMATES ROG NOX CO 29.44 27.98 296.08 ISSION ESTIMATES ROG NOX CO	65.75 11.44 6.70 0.00 ESTIMATES ROG NOX CO SO2 29.44 27.98 296.08 0.80 ISSION ESTIMATES ROG NOX CO SO2

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URBEMIS 2002 For Windows 8.7.0

File Name: Project Name: Project Location: P:\Projects - All Users\D20800.00+\D20950.01 Santa Ana Metro East MU\Air Quality\Vol D20950.01 Santa Ana MU Overlay Operation South Coast Air Basin (Los Angeles area) On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATE	S (Winter	Pounds per	Day, Unmiti	gated)	
Source	ROG	NOx	CO	S02	PM10
Natural Gas	4.74	62.69	35.78	0	0.12
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emis	sions				
Consumer Prdcts	264.18	-	-	-	-
Architectural Coatings	126.09	-	-	-	-
TOTALS(lbs/day,unmitigated)	395.01	62.69	35.78	0.00	0.12

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UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	S02	PM10
Apartments mid rise	61.00	77.18	634.15	1.69	314.33
Strip mall	72.57	100.02	792.10	2.05	398.98
General office building	11.27	14.89	117.85	0.32	61.18
TOTAL EMISSIONS (1bs/day)	144.84	192.09	1,544.10	4.05	774.49

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2030 Temperature (F): 50 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip	Rate	No. Total Units Trips
Apartments mid rise Strip mall General office building	142.11	42.94	trips/dwelling unit trips/1000 sq. ft. trips/1000 sq. ft.	5,400.0031,104.00 1,100.0047,234.00 1,700.00 5,644.00

Sum of Total Trips 83,982.00 Total Vehicle Miles Traveled 512,946.70

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	52.50	0.00	100.00	0.00
Light Truck < 3,750 lb	s 15.90	0.00	100.00	0.00
Light Truck 3,751-5,75	0 16.70	0.00	100.00	0.00
Med Truck 5,751-8,50	0 7.60	0.00	100.00	0.00
Lite-Heavy 8,501-10,00	0 1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,00	0 0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,00	0 0.90	0.00	22.20	77.80
Heavy-Heavy 33,001-60,00	0 0.70	0.00	0.00	100.00
Line Haul > 60,000 lb	s 0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.50	33.30	66.70	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	2.60	0.00	92.30	7.70

Traver Conditions						
	F	Residential		Commercial		
	Home-	Home-	Home-			
	Work	Shop	Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (Strip mall General office building	by land u	ise)		2.0 35.0	1.0 17.5	97.0 47.5

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The hearth option switch changed from on to off. The landscape year changed from 2005 to 2020.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2030.

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URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Users\D20800.00+\D20950.01 Santa Ana Metro East MU\Air Quality\Volu Project Name: D20950.01 Santa Ana MU Overlay Operation Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES	(Summer	Pounds per	Day, Unmiti	gated)	
Source	ROG	NOx	CO	S02	PM10
Natural Gas	4.74	62.69	35.78	0	0.12
Hearth - No summer emissions					
Landscaping	0.27	0.03	1.89	0.00	0.00
Consumer Prdcts	264.18	-	-	-	_
Architectural Coatings	126.09	-	-	-	_
TOTALS(lbs/day,unmitigated)	395.28	62.72	37.67	0.00	0.12

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UNMITIGATED OPERATIONAL EMISSIONS

Apartments mid rise Strip mall General office building	ROG 79.75 71.96 17.84	NOx 53.73 69.89 10.34	CO 691.90 839.54 130.01	SO2 1.90 2.28 0.35	PM10 314.33 398.98 61.18
TOTAL EMISSIONS (lbs/day)	169.55	133.96	1,661.45	4.54	774.49

Does not include correction for passby trips. Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2030 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip	Rate	No. Total Units Trips
Apartments mid rise Strip mall General office building	142.11	42.94	trips/dwelling unit trips/1000 sq. ft. trips/1000 sq. ft.	5,400.0031,104.00 1,100.0047,234.00 1,700.00 5,644.00

Sum of Total Trips 83,982.00 Total Vehicle Miles Traveled 512,946.70

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	52.50	0.00	100.00	0.00
Light Truck < 3,750 lbs	15.90	0.00	100.00	0.00
Light Truck 3,751- 5,750	16.70	0.00	100.00	0.00
Med Truck 5,751- 8,500	7.60	0.00	100.00	0.00
Lite-Heavy 8,501-10,000	1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	0.90	0.00	22.20	77.80
Heavy-Heavy 33,001-60,000	0.70	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.50	33.30	66.70	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	2.60	0.00	92.30	7.70

Travel Conditions

	Residential			Commercial		
Urban Trip Length (miles) Rural Trip Length (miles) Trip Speeds (mph)		Home- Shop 4.9 4.9 40.0	Home- Other 6.0 6.0 40.0	Commute 10.3 10.3 40.0	Non-Work 5.5 5.5 40.0	Customer 5.5 5.5 40.0
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (Strip mall General office building	by land	use)		2.0 35.0	1.0 17.5	97.0 47.5

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The hearth option switch changed from on to off. The landscape year changed from 2005 to 2020.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2030.

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URBEMIS 2002 For Windows 8.7.0

File Name: P:\Projects - All Users\D20800.00+\D20950.01 Santa Ana Metro East MU\Air Quality\Volu Project Name: D20950.01 Santa Ana MU Overlay Operation Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT (Tons/Year)

AREA SOURCE EMISSION ESTIMATES	(Tons per	Year,	Unmitigated)		
Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.87	11.44	6.53	0.00	0.02
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping	0.02	0.00	0.17	0.00	0.00
Consumer Prdcts	48.21	-	-	-	-
Architectural Coatings	16.64	-	-	-	-
TOTALS (thy unmitigated)	65 75	11 44	6.70	0.00	0.02

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UNMITIGATED OPERATIONAL EMISSIONS

Apartments mid rise Strip mall	ROG 13.41 13.17	NOx 11.23 14.59	CO 122.76 150.33	SO2 0.33 0.40	PM10 57.37 72.81
General office building	2.86	2.16	22.99	0.40	11.16
TOTAL EMISSIONS (tons/vr)	29.44	27.98	296.08	0.80	141.34

Does not include correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2030 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Total Units Trips
Apartments mid rise Strip mall General office building	142.11	5.76 trips/dwelling un 42.94 trips/1000 sq. ft 3.32 trips/1000 sq. ft	. 1,100.0047,234.00

Sum of Total Trips 83,982.00 Total Vehicle Miles Traveled 512,946.70

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	52.50	0.00	100.00	0.00
Light Truck < 3,750	lbs 15.90	0.00	100.00	0.00
Light Truck 3,751- 5,	,750 16.70	0.00	100.00	0.00
Med Truck 5,751-8,	,500 7.60	0.00	100.00	0.00
Lite-Heavy 8,501-10,	,000 1.00	0.00	80.00	20.00
Lite-Heavy 10,001-14,	,000 0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,	,000 0.90	0.00	22.20	77.80
Heavy-Heavy 33,001-60,	,000 0.70	0.00	0.00	100.00
Line Haul > 60,000	lbs 0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.50	33.30	66.70	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	2.60	0.00	92.30	7.70

Travel Conditions						
		Residential			Commercial	
	Home-	Home-	Home-			
	Work	Shop	Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (Strip mall General office building	by land	use)		2.0 35.0	1.0 17.5	97.0 47.5

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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The hearth option switch changed from on to off. The landscape year changed from 2005 to 2020.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2030.

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

Roadway Data

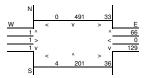
Intersection: Analysis Condition:

Wellington Avenue and Cabrillo Park Drive Existing Conditions

			No. of	Average	; ڊ
		Roadway Type	Lanes	A.M.	Ξ
North-South Roadway:	Cabrillo Park Drive	At Grade	6	15	
East-West Roadway:	Wellington Avenue	At Grade	2	15	

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	862	N-S Road:	888
E W Dood:	265	E W Dood:	215

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A_2	A_3	В	С			
	Reference	CO Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	6.1 2.7	4.9 2.2	3.5 1.7	862 265	7.55 7.55	0.40 0.05	0.32 0.04	0.23 0.03
P.M. Peak Traffic Hour North-South Road East-West Road	6.1 2.7	4.9 2.2	3.5 1.7	888 215	7.55 7.55	0.41 0.04	0.33 0.04	0.23 0.03

Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.5	6.5	4.5
50 Feet from Roadway Edge	6.4	6.4	4.4
100 Feet from Roadway Edge	6.3	6.3	4.3

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Wellington Avenue and Cabrillo Park Drive.xls EIP Associates, a Division of PBS&J

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

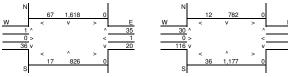
Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

Roadway Data

Tustin Avenue and Sixth Street Existing Conditions Intersection:

Analysis Condition:

			No. of	Average	e Speea	
		Roadway Type	Lanes	A.M.	P.M.	
North-South Roadway:	Tustin Avenue	At Grade	8	15	15	
East-West Roadway:	Sixth Street	At Grade	2	15	15	
A.M. Peak Hour Traffic Volumes		P.M. Peak Hour Tr	affic Volu	mes		
NI	ı	мI			ı	



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,547	N-S Road:	2,116
E-W Road:	122	E-W Road:	194

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	e CO Cond	entrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	5.7 2.7	4.6 2.2	3.4 1.7	2,547 122	7.55 7.55	1.10 0.02	0.88 0.02	0.65 0.02
P.M. Peak Traffic Hour North-South Road East-West Road	5.7 2.7	4.6 2.2	3.4 1.7	2,116 194	7.55 7.55	0.91 0.04	0.74 0.03	0.54 0.02

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

12/18/2006

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	7.1	7.0	5.0
50 Feet from Roadway Edge	6.9	6.8	4.8
100 Feet from Roadway Edge	6.7	6.6	4.6

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Tustin Avenue and Sixth Street.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0
Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

Roadway Data

Seventeenth Street and Tustin Avenue Intersection:

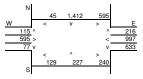
Analysis Condition: Existing Conditions

North-South Roadway: Tustin Avenue East-West Roadway: Seventeenth Street

	No. of	Average Speed		
Roadway Type	Lanes	A.M.	P.M.	
At Grade	8	15	15	
At Grado	0	15	15	

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,718	N-S Road:	2,586
E-W Road:	3,276	E-W Road:	3,580

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A_1	A_2	A_3	В	С			
	Reference	e CO Cond	centrations	Traffic	Emission	Estimated	CO Conc	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Fee
A.M. Peak Traffic Hour North-South Road East-West Road	2.2 5.7	1.9 4.6	1.6 3.4	2,718 3,276	7.55 7.55	0.45 1.41	0.39 1.14	0.33 0.84
P.M. Peak Traffic Hour North-South Road East-West Road	2.2 5.7	1.9 4.6	1.6 3.4	2,586 3.580	7.55 7.55	0.43 1.54	0.37 1.24	0.31

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	7.9	8.0	5.7
50 Feet from Roadway Edge	7.5	7.6	5.4
100 Feet from Roadway Edge	7.2	7.2	5.1

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Seventeenth Street and Tustin Avenue.xls EIP Associates, a Division of PBS&J 12/18/2006

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

Roadway Data

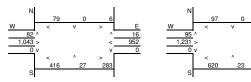
Seventeenth Street and SR-55 Northbound Ramps Existing Conditions Intersection:

Analysis Condition:

			No. of	Average	e Speed	
		Roadway Type	Lanes	A.M.	P.M.	
North-South Roadway:	SR-55 Northbound Ramps	At Grade	4	15	15	
Fast-West Roadway	Seventeenth Street	At Grade	8	15	15	

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	726	N-S Road:	976
E-W Road:	2,572	E-W Road:	3,069

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A_2	A_3	В	С			
	Reference	CO Cond	entrations	Traffic	Emission	Estimated	CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	726 2,572	7.55 7.55	0.14 1.11	0.12 0.89	0.09 0.66
P.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	976 3,069	7.55 7.55	0.19 1.32	0.16 1.07	0.13 0.79

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	7.2	7.5	5.3
50 Feet from Roadway Edge	7.0	7.2	5.1
100 Feet from Roadway Edge	6.8	6.9	4.8

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Seventeenth Street and SR-55 NB.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

Roadway Data

Intersection: Analysis Condition:

Seventeenth Street and Cabrillo Park Drive

Existing Conditions

			No. of	Averag
		Roadway Type	Lanes	A.M.
North-South Roadway:	Seventeenth Street	At Grade	6	15
East-West Roadway:	Cabrillo Park Drive	At Grade	8	15

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	785	N-S Road:	915
E W Dood:	2 247	E W Dood:	2 046

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A_1	A_2	A_3	В	С			
	Reference	e CO Cond	centrations	Traffic	Emission	Estimated	CO Conc	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Fee
A.M. Peak Traffic Hour North-South Road East-West Road	2.3 5.7	2.0 4.6	1.7 3.4	785 2,247	7.55 7.55	0.14 0.97	0.12 0.78	0.10 0.58
P.M. Peak Traffic Hour North-South Road East-West Road	2.3 5.7	2.0	1.7 3.4	915 3.046	7.55 7.55	0.16 1.31	0.14 1.06	0.12 0.78

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	7.1	7.5	5.3
50 Feet from Roadway Edge	6.9	7.2	5.0
100 Feet from Roadway Edge	6.7	6.9	4.8

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Seventeenth Street and Cabrillo Park Drive.xls EIP Associates, a Division of PBS&J

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

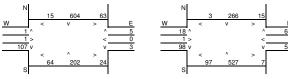
Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

Roadway Data

Park Court Place and Cabrillo Park Drive Existing Conditions Intersection: Analysis Condition:

			No. of	Average	e Speed
		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	Cabrillo Park Drive	At Grade	6	15	15
East-West Roadway:	Park Court Place	At Grade	2	15	15
A.M. Peak Hour Traffic Volumes		P.M. Peak Hour Tr	affic Volu	mes	
N		N			1



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,004	N-S Road:	1,045
E-W Road:	188	E-W Road:	218

Roadway CO Contributions and Concentrations

Emissions = $(A \times B \times C) / 100,000^{1}$

	A ₁	A ₂	A_3	В	С			
	Reference	e CO Cond	entrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	6.1 2.7	4.9 2.2	3.5 1.7	1,004 188	7.55 7.55	0.46 0.04	0.37 0.03	0.27 0.02
P.M. Peak Traffic Hour North-South Road East-West Road	6.1 2.7	4.9 2.2	3.5 1.7	1,045 218	7.55 7.55	0.48 0.04	0.39 0.04	0.28 0.03

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

12/18/2006

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.5	6.5	4.5
50 Feet from Roadway Edge	6.4	6.4	4.4
100 Feet from Roadway Edge	6.3	6.3	4.3

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Park Court Place and Cabrillo Park Drive.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0
Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

Roadway Data

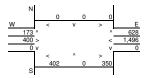
Irvine Boulevard and SR-55 Northbound Ramps Existing Conditions Intersection:

Analysis Condition:

			No. of	Average	e Speed
		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	SR-55 Northbound Ramps	At Grade	4	15	15
East-West Roadway:	Irvine Boulevard	At Grade	8	15	15

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	801	N-S Road:	1,092
E-W Road:	2,874	E-W Road:	3,208

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	CO Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	801 2,874	7.55 7.55	0.16 1.24	0.13 1.00	0.10 0.74
P.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	1,092 3,208	7.55 7.55	0.21 1.38	0.18 1.11	0.14 0.82

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	7.4	7.6	5.4
50 Feet from Roadway Edge	7.1	7.3	5.1
100 Feet from Roadway Edge	6.8	7.0	4.9

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Irvine Boulevard and SR-55 NB.xls EIP Associates, a Division of PBS&J 12/18/2006

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

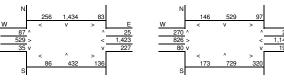
Roadway Data

Irvine Boulevard and Newport Boulevard Existing Conditions Intersection: Analysis Condition:

			No. of Average Sp		e Speed	
		Roadway Type	Lanes	A.M.	P.M.	
North-South Roadway:	Newport Boulevard	At Grade	8	15	15	
East-West Roadway:	Irvine Boulevard	At Grade	8	15	15	

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,350	N-S Road:	2,024
E-W Road:	2,423	E-W Road:	2,642

Roadway CO Contributions and Concentrations

Emissions = $(A \times B \times C) / 100,000^{1}$

	A ₁	A ₂	A_3	В	С			
	Reference	e CO Cond	entrations	Traffic	Emission	Estimate	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	2.2 5.7	1.9 4.6	1.6 3.4	2,350 2,423	7.55 7.55	0.39 1.04	0.34 0.84	0.28 0.62
P.M. Peak Traffic Hour North-South Road East-West Road	2.2 5.7	1.9 4.6	1.6 3.4	2,024 2,642	7.55 7.55	0.34 1.14	0.29 0.92	0.24 0.68

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	7.4	7.5	5.3
50 Feet from Roadway Edge	7.2	7.2	5.1
100 Feet from Roadway Edge	6.9	6.9	4.8

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Irvine Boulevard and Newport Boulevard.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

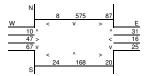
Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0
Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

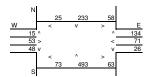
Roadway Data

Intersection: Analysis Condition:

Fruit Street and Cabrillo Park Drive Existing Conditions

			No. of	Average	e Speea
		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	Cabrillo Park Drive	At Grade	6	15	15
East-West Roadway:	Fruit Street	At Grade	2	15	15
A.M. Peak Hour Traffic V	olumes	P.M. Peak Hour Ti	affic Volu	mes	





Highest Traffic Volumes (Vehicles per Hour)

N-S Road: N-S Road: 958 E-W Road: E-W Road: 405

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A_1	A_2	A_3	В	С			
	Reference	e CO Cond	entrations	Traffic	Emission	Estimated	CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	6.1 2.7	4.9 2.2	3.5 1.7	879 226	7.55 7.55	0.40 0.05	0.33 0.04	0.23 0.03
P.M. Peak Traffic Hour North-South Road East-West Road	6.1 2.7	4.9 2.2	3.5 1.7	958 405	7.55 7.55	0.44 0.08	0.35 0.07	0.25 0.05

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Fruit Street and Cabrillo Park Drive.xls

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

	A.M.	P.M.		
	Peak Hour	Peak Hour	8-Hour	
25 Feet from Roadway Edge	6.5	6.5	4.5	
50 Feet from Roadway Edge	6.4	6.4	4.4	
100 Feet from Roadway Edge	6.3	6.3	4.3	

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

EIP Associates, a Division of PBS&J

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

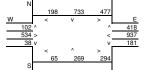
Roadway Data

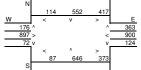
Fourth Street and Tustin Avenue Existing Conditions Intersection: Analysis Condition:

			No. of Average Spee		e Speed	
		Roadway Type	Lanes	A.M.	P.M.	
North-South Roadway:	Tustin Avenue	At Grade	8	15	15	
East-West Roadway:	Fourth Street	At Grade	8	15	15	

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,197	N-S Road:	2,268
E-W Road:	2,841	E-W Road:	3,074

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	e CO Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	2.2 5.7	1.9 4.6	1.6 3.4	2,197 2,841	7.55 7.55	0.37 1.22	0.32 0.99	0.27 0.73
P.M. Peak Traffic Hour North-South Road East-West Road	2.2 5.7	1.9 4.6	1.6 3.4	2,268 3,074	7.55 7.55	0.38 1.32	0.33 1.07	0.27 0.79

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

12/18/2006

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M.	P.M.		
	Peak Hour	Peak Hour	8-Hour	
25 Feet from Roadway Edge	7.6	7.7	5.5	
50 Feet from Roadway Edge	7.3	7.4	5.2	
100 Feet from Roadway Edge	7.0	7.1	4.9	

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Fourth Street and Tustin Avenue.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0
Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

Roadway Data

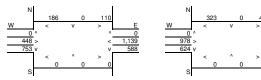
Fourth Street and SR-55 Southbound Ramps Intersection:

Analysis Condition: Existing Conditions

			No. of	Average	e Speed
		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	SR-55 Southbound Ramps	At Grade	4	15	15
Fast-West Boadway:	Fourth Street	At Grade	8	15	15

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,341	N-S Road:	1,010
E-W Road:	2,526	E-W Road:	3,064

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	CO Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Fee
A.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	1,341 2,526	7.55 7.55	0.26 1.09	0.22 0.88	0.17 0.65
P.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	1,010 3,064	7.55 7.55	0.20 1.32	0.17 1.06	0.13 0.79

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

	A.M.	P.M.		
	Peak Hour	Peak Hour	8-Hour	
25 Feet from Roadway Edge	7.4	7.5	5.3	
50 Feet from Roadway Edge	7.1	7.2	5.1	
100 Feet from Roadway Edge	6.8	6.9	4.8	

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Fourth Street and SR-55 SB.xls EIP Associates, a Division of PBS&J 12/18/2006

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

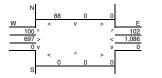
Roadway Data

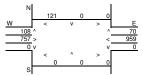
Fourth Street and Parkcenter Drive Existing Conditions Intersection: Analysis Condition:

			No. of Average Spee		e Speed
		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	Parkcenter Drive	At Grade	2	15	15
East-West Roadway:	Fourth Street	At Grade	8	15	15

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	290	N-S Road:	299
E-W Road:	1,971	E-W Road:	1,945

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A_2	A_3	В	С			
	Reference	e CO Cond	centrations	Traffic	Emission	Estimated	CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	290	7.55	0.06	0.05	0.04
East-West Road	5.7	4.6	3.4	1,971	7.55	0.85	0.68	0.51
P.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	299	7.55	0.06	0.05	0.04
East-West Road	5.7	4.6	3.4	1,945	7.55	0.84	0.68	0.50

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M.	P.IVI.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.9	6.9	4.8
50 Feet from Roadway Edge	6.7	6.7	4.7
100 Feet from Roadway Edge	6.5	6.5	4.5

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Fourth Street and Parkcenter Drive.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

Roadway Data

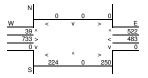
Intersection: Analysis Condition: Fourth Street and I-5 Northbound Ramps

Existing Conditions

			No. of	Average	e Speea
		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	I-5 Northbound Ramps	At Grade	2	15	15
East-West Roadway:	Fourth Street	At Grade	8	15	15

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	561	N-S Road:	1,155
E W Dood:	1 000	E W Dood:	2 020

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	O Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	2.7 5.7	2.2 4.6	1.7 3.4	561 1,988	7.55 7.55	0.11 0.86	0.09 0.69	0.07 0.51
P.M. Peak Traffic Hour North-South Road East-West Road	2.7 5.7	2.2 4.6	1.7 3.4	1,155 2,929	7.55 7.55	0.24 1.26	0.19 1.02	0.15 0.75

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	7.0	7.5	5.3
50 Feet from Roadway Edge	6.8	7.2	5.1
100 Feet from Roadway Edge	6.6	6.9	4.8

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

12/18/2006 Fourth Street and I-5 NB.xls EIP Associates, a Division of PBS&J

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

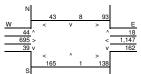
Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

Roadway Data

Intersection: Fourth Street and Golden Circle Drive Existing Conditions Analysis Condition:

			No. of	Average	e Speed	
		Roadway Type	Lanes	A.M.	P.M.	
North-South Roadway:	Golden Circle Drive	At Grade	4	15	15	
East-West Roadway:	Fourth Street	At Grade	8	15	15	
A.M. Peak Hour Traffic Vo	lumes	P.M. Peak Hour Tr	affic Volu	mes		





Highest Traffic Volumes (Vehicles per Hour)

N-S Road: 433 N-S Road: 513 E-W Road: 2,089 E-W Road: 2,253

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A_2	A_3	В	С			
	Reference	CO Cond	entrations	Traffic	Emission	Estimated	CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	433 2,089	7.55 7.55	0.09 0.90	0.07 0.73	0.06 0.54
P.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	513 2,253	7.55 7.55	0.10 0.97	0.09 0.78	0.07 0.58

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	7.0	7.1	4.9
50 Feet from Roadway Edge	6.8	6.9	4.8
100 Feet from Roadway Edge	6.6	6.6	4.6

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Fourth Street and Golden Circle Drive.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0
Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

Roadway Data

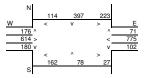
Intersection: Analysis Condition: Fourth Street and Cabrillo Park Drive

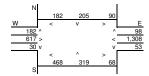
Existing Conditions

			No. of	Average	Speed
		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	Cabrillo Park Drive	At Grade	6	15	15
East-West Roadway:	Fourth Street	At Grade	8	15	15

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,059	N-S Road:	1,143
E-W Road:	2,021	E-W Road:	2,787

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	O Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Fee
A.M. Peak Traffic Hour North-South Road East-West Road	2.3 5.7	2.0 4.6	1.7 3.4	1,059 2,021	7.55 7.55	0.18 0.87	0.16 0.70	0.14 0.52
P.M. Peak Traffic Hour North-South Road East-West Road	2.3 5.7	2.0 4.6	1.7 3.4	1,143 2,787	7.55 7.55	0.20 1.20	0.17 0.97	0.15 0.72

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

	A.M.	P.M.			
	Peak Hour	Peak Hour	8-Hour		
25 Feet from Roadway Edge	7.1	7.4	5.2		
50 Feet from Roadway Edge	6.9	7.1	5.0		
100 Feet from Roadway Edge	6.7	6.9	4.8		

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Fourth Street and Cabrillo Park Drive.xls EIP Associates, a Division of PBS&J 12/18/2006

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

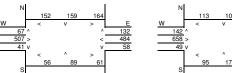
Background Information

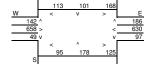
Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

Roadway Data

First Street and Prospect Avenue Existing Conditions Intersection: Analysis Condition:

			No. of	Average	Speed	eed	
		Roadway Type	Lanes	A.M.	P.M.	•	
North-South Roadway:	Prospect Avenue	At Grade	6	15	15		
East-West Roadway:	First Street	At Grade	6	15	15		
A.M. Peak Hour Traffic Volumes		P.M. Peak Hour Tr	affic Volu	mes			





Highest Traffic Volumes (Vehicles per Hour)

N-S Road: 763 N-S Road: 888 E-W Road: 1,406 E-W Road: 1,864

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A_2	A_3	В	С			
	Reference	e CO Cond	centrations	Traffic	Emission	Estimated	CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.3	2.0	1.7	763	7.55	0.13	0.12	0.10
East-West Road	6.1	4.9	3.5	1,406	7.55	0.65	0.52	0.37
P.M. Peak Traffic Hour								
North-South Road	2.3	2.0	1.7	888	7.55	0.15	0.13	0.11
East-West Road	6.1	4.9	3.5	1,864	7.55	0.86	0.69	0.49

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

A.M.	P.M.			
Peak Hour	Peak Hour	8-Hour		
6.8	7.0	4.9		
6.6	6.8	4.7		
6.5	6.6	4.6		
	Peak Hour 6.8 6.6	Peak Hour Peak Hour 6.8 7.0 6.6 6.8		

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

First Street and Prospect Avenue.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0
Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

Roadway Data

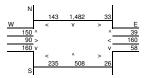
First Street and Newport Avenue Intersection:

Analysis Condition: Existing Conditions

			No. of	Average	e Speed
		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	Newport Avenue	At Grade	8	15	15
East-West Roadway:	First Street	At Grade	8	15	15

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,469	N-S Road:	2,519
E-W Road:	938	E-W Road:	1,430

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	O Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Fee
A.M. Peak Traffic Hour North-South Road East-West Road	5.7 2.2	4.6 1.9	3.4 1.6	2,469 938	7.55 7.55	1.06 0.16	0.86 0.13	0.63 0.11
P.M. Peak Traffic Hour North-South Road East-West Road	5.7 2.2	4.6 1.9	3.4 1.6	2,519 1,430	7.55 7.55	1.08 0.24	0.88 0.21	0.65 0.17

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

First Street and Newport Avenue.xls

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

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12/18/2006

	A.M.	P.M.		
	Peak Hour	Peak Hour	8-Hour	
25 Feet from Roadway Edge	7.2	7.3	5.1	
50 Feet from Roadway Edge	7.0	7.1	5.0	
100 Feet from Roadway Edge	6.7	6.8	4.7	

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

Roadway Data

First Street and Elk Lane Existing Conditions Intersection: Analysis Condition:

North-South Roadway: East-West Roadway:	Elk Lane First Street	At Grade At Grade		15 15 15 15
A.M. Peak Hour Traffic Vol	umes	P.M. Peak Hour Traf	fic Volumes	
N 407 16 0 ^ 7 1,148 > 8 v < ^	1 269 E	N 378 0 ^ 1,435 > 24 v <		275 E ^ 0 < 748 v 50 >

No. of Average Speed

Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	837	N-S Road:	762
E-W Road:	2,590	E-W Road:	3,001

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	e CO Cond	entrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	2.3 5.7	2.0 4.6	1.7 3.4	837 2,590	7.55 7.55	0.15 1.12	0.13 0.90	0.11 0.67
P.M. Peak Traffic Hour North-South Road East-West Road	2.3 5.7	2.0 4.6	1.7 3.4	762 3,001	7.55 7.55	0.13 1.29	0.12 1.04	0.10 0.77

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M.	P.M.			
	Peak Hour	Peak Hour	8-Hour		
25 Feet from Roadway Edge	7.3	7.4	5.2		
50 Feet from Roadway Edge	7.0	7.2	5.0		
100 Feet from Roadway Edge	6.8	6.9	4.8		

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

First Street and Elk Lane.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

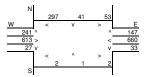
Roadway Data

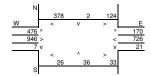
Intersection: Analysis Condition: First Street and Cabrillo Park Drive Existing Conditions

			No. of	Average	e Speed
		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	Cabrillo Park Drive	At Grade	4	15	15
East-West Roadway:	First Street	At Grade	8	15	15

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	780	N-S Road:	1,186
E-W Road:	1,840	E-W Road:	2,559

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	CO Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	780 1,840	7.55 7.55	0.15 0.79	0.13 0.64	0.10 0.47
P.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	1,186 2,559	7.55 7.55	0.23 1.10	0.20 0.89	0.15 0.66

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

First Street and Cabrillo Park Drive.xls

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

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12/18/2006

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.9	7.3	5.2
50 Feet from Roadway Edge	6.8	7.1	5.0
100 Feet from Roadway Edge	6.6	6.8	4.7

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2006

Roadway Data

Intersection: First Street and B Street Existing Conditions Analysis Condition:

		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	B Street	At Grade	2	15	15
East-West Roadway:	First Street	At Grade	6	15	15
A.M. Peak Hour Traffic Vol	umes	P.M. Peak Hour Tr	affic Volu	nes	
N 125 1. 82 ^	2 13 E A C 24 A C 20 A	N 47 26 ^ 786 > 20 V < 10	15 V	16 > ^ < v > 48	E 25 885 17

No. of Average Speed

Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	270	N-S Road:	134
E-W Road:	1,548	E-W Road:	1,777

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	CO Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	2.7 6.1	2.2 4.9	1.7 3.5	270 1,548	7.55 7.55	0.06 0.71	0.04 0.57	0.03 0.41
P.M. Peak Traffic Hour North-South Road East-West Road	2.7 6.1	2.2 4.9	1.7 3.5	134 1,777	7.55 7.55	0.03 0.82	0.02 0.66	0.02 0.47

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.8	6.8	4.8
50 Feet from Roadway Edge	6.6	6.7	4.6
100 Feet from Roadway Edge	6.4	6.5	4.5

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

First Street and B Street.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0
Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

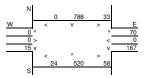
Roadway Data

Intersection: Analysis Condition: Wellington Avenue and Cabrillo Park Drive Existing Conditions

			No. of	Average	e Speed
		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	Cabrillo Park Drive	At Grade	6	15	15
East-West Roadway:	Wellington Avenue	At Grade	2	15	15

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,572	N-S Road:	1,671
E-W Road:	328	E-W Road:	268

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	CO Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Fee
A.M. Peak Traffic Hour North-South Road East-West Road	6.1 2.7	4.9 2.2	3.5 1.7	1,572 328	1.23 1.23	0.12 0.01	0.09 0.01	0.07 0.01
P.M. Peak Traffic Hour North-South Road East-West Road	6.1 2.7	4.9 2.2	3.5 1.7	1,671 268	1.23 1.23	0.13 0.01	0.10 0.01	0.07 0.01

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.1	6.1	4.2
50 Feet from Roadway Edge	6.1	6.1	4.2
100 Feet from Roadway Edge	6.1	6.1	4.2

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Wellington Avenue and Cabrillo Park Drive.xls EIP Associates, a Division of PBS&J

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

Roadway Data

Tustin Avenue and Sixth Street Existing Conditions Intersection:

Analysis Condition:

		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	Tustin Avenue	At Grade	8	15	15
East-West Roadway:	Sixth Street	At Grade	2	15	15
A.M. Peak Hour Traffic	Volumes	P.M. Peak Hour Tr	affic Volu	mes	
N		N			
	2,420 0	53	,	U	_
	v > <u>E</u>	<u>W</u> <	V	> ^	<u>E</u>
<u>19</u> ^	42	88 ^		^.	8
<u>0</u> >	< 0	0 >		<	0
<u>111</u> v	v <u>25</u>	313 v	^	V	6
`		<		>	
	1,231 0	77	1,928	0	
S		S			
Highest Traffic Volume	s (Vehicles per Hour)				

No. of Average Speed

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

N-S Road: 3,818

E-W Road:

	A ₁	A ₂	A_3	В	С			
	Reference	e CO Cond	entrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	5.7 2.7	4.6 2.2	3.4 1.7	3,818 257	1.23 1.23	0.27 0.01	0.22 0.01	0.16 0.01
P.M. Peak Traffic Hour North-South Road East-West Road	5.7 2.7	4.6 2.2	3.4 1.7	3,589 531	1.23 1.23	0.25 0.02	0.20 0.01	0.15 0.01

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

12/18/2006

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

N-S Road: 3,589

E-W Road:

	A.M.	P.M.		
	Peak Hour	Peak Hour	8-Hour	
25 Feet from Roadway Edge	6.3	6.3	4.3	
50 Feet from Roadway Edge	6.2	6.2	4.3	
100 Feet from Roadway Edge	6.2	6.2	4.2	

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Tustin Avenue and Sixth Street.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0
Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

Roadway Data

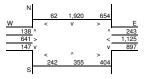
Intersection: Analysis Condition: Seventeenth Street and Tustin Avenue

Existing Conditions

		_ Roadway Ty
North-South Roadway:	Tustin Avenue	At Grade
East-West Roadway:	Seventeenth Street	At Grade
		At G

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Lanes

No. of Average Speed

Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	3,965	N-S Road:	3,697
E-W Road:	3,964	E-W Road:	4,304

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A_1	A_2	A_3	В	С			
	Reference	e CO Cond	centrations	Traffic	Emission	Estimated	CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	5.7 2.2	4.6 1.9	3.4 1.6	3,965 3,964	1.23 1.23	0.28 0.11	0.22 0.09	0.17 0.08
P.M. Peak Traffic Hour North-South Road East-West Road	2.2 5.7	1.9 4.6	1.6 3.4	3,697 4,304	1.23 1.23	0.10 0.30	0.09 0.24	0.07 0.18

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.4	6.4	4.4
50 Feet from Roadway Edge	6.3	6.3	4.4
100 Feet from Roadway Edge	6.2	6.3	4.3

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Seventeenth Street and Tustin Avenue.xls EIP Associates, a Division of PBS&J 12/18/2006

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

Roadway Data

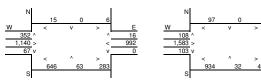
Seventeenth Street and SR-55 Northbound Ramps Existing Conditions Intersection:

Analysis Condition:

			No. of	Average	Speed
		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	SR-55 Northbound Ramps	At Grade	4	15	15
Fast-West Roadway:	Seventeenth Street	At Grade	8	15	15

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,059	N-S Road:	1,563
E-W Road:	3,212	E-W Road:	4,081

Roadway CO Contributions and Concentrations

Emissions = $(A \times B \times C) / 100,000^{1}$

	A ₁	A ₂	A_3	В	С				
	Reference	CO Cond	entrations	Traffic	Emission	Estimated	CO Cond	entrations	
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet	
A.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	1,059 3,212	1.23 1.23	0.03 0.23	0.03 0.18	0.02 0.13	
P.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	1,563 4,081	1.23 1.23	0.05 0.29	0.04 0.23	0.03 0.17	

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

A.M.	P.M.		
Peak Hour	Peak Hour	8-Hour	
6.3	6.3	4.4	
6.2	6.3	4.3	
6.2	6.2	4.3	
	Peak Hour 6.3 6.2	Peak Hour Peak Hour 6.3 6.3 6.2 6.3	

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Seventeenth Street and SR-55 NB.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0
Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

Roadway Data

Intersection: Analysis Condition:

Seventeenth Street and Cabrillo Park Drive

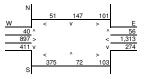
Existing Conditions

North-South Roadway: East-West Roadway:	Seventeenth Street Cabrillo Park Drive	_

		No. of	Average	e Speed
	Roadway Type	Lanes	A.M.	P.M.
Ī	At Grade	6	15	15
	At Grade	8	15	15

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,382	N-S Road:	1,555
E-W Road:	3,087	E-W Road:	3,992

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	CO Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	2.3 5.7	2.0 4.6	1.7 3.4	1,382 3,087	1.23 1.23	0.04 0.22	0.03 0.17	0.03 0.13
P.M. Peak Traffic Hour North-South Road East-West Road	2.3 5.7	2.0 4.6	1.7 3.4	1,555 3,992	1.23 1.23	0.04 0.28	0.04 0.23	0.03 0.17

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

A.M.	P.M.	
Peak Hour	Peak Hour	8-Hour
6.3	6.3	4.3
6.2	6.3	4.3
6.2	6.2	4.2
	Peak Hour 6.3 6.2	Peak Hour Peak Hour 6.3 6.3 6.2 6.3

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Seventeenth Street and Cabrillo Park Drive.xls EIP Associates, a Division of PBS&J

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

Roadway Data

Park Court Place and Cabrillo Park Drive Existing Conditions Intersection:

Analysis Condition:

			No. of	Average	Speed
		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	Cabrillo Park Drive	At Grade	6	15	15
East-West Roadway:	Park Court Place	At Grade	2	15	15
A.M. Peak Hour Traffic Vo	lumes	P.M. Peak Hour Tr	affic Volu	mes	
N 16 98	31 74 E	N 4	579 V	20	_
<u>vv</u> < v	^ <u>= =</u>	25 ^	V	> ,	78
<u>~</u>	~ 	25 "			
0 >	< <u>U</u>	163 v		<.	56

Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,791	N-S Road:	1,989
E-W Road:	272	E-W Road:	355

Roadway CO Contributions and Concentrations

Emissions = $(A \times B \times C) / 100,000^{1}$

	A ₁	A ₂	A_3	В	С			
	Reference	e CO Cond	entrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	6.1 2.7	4.9 2.2	3.5 1.7	1,791 272	1.23 1.23	0.13 0.01	0.11 0.01	0.08 0.01
P.M. Peak Traffic Hour North-South Road East-West Road	6.1 2.7	4.9 2.2	3.5 1.7	1,989 355	1.23 1.23	0.15 0.01	0.12 0.01	0.09 0.01

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

12/18/2006

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.1	6.2	4.2
50 Feet from Roadway Edge	6.1	6.1	4.2
100 Feet from Roadway Edge	6.1	6.1	4.2

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Park Court Place and Cabrillo Park Drive.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

Roadway Data

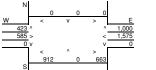
Irvine Boulevard and SR-55 Northbound Ramps Existing Conditions Intersection:

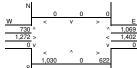
Analysis Condition:

			No. of	Average	Speed
		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	SR-55 Northbound Ramps	At Grade	4	15	15
East-West Roadway:	Irvine Boulevard	At Grade	8	15	15

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,575	N-S Road:	1,799
E-W Road:	3,823	E-W Road:	4,434

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	CO Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Fee
A.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	1,575 3,823	1.23 1.23	0.05 0.27	0.04 0.22	0.03 0.16
P.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	1,799 4,434	1.23 1.23	0.06 0.31	0.05 0.25	0.04 0.19

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.3	6.4	4.4
50 Feet from Roadway Edge	6.3	6.3	4.3
100 Feet from Roadway Edge	6.2	6.2	4.3

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Irvine Boulevard and SR-55 NB.xls EIP Associates, a Division of PBS&J 12/18/2006

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

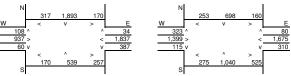
Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

Roadway Data

Irvine Boulevard and Newport Boulevard Existing Conditions Intersection: Analysis Condition:

		No. ofAverag		ge Speed		
		Roadway Type	Lanes	A.M.	P.M.	
North-South Roadway:	Newport Boulevard	At Grade	8	15	15	
East-West Roadway:	Irvine Boulevard	At Grade	8	15	15	
A.M. Peak Hour Traffic Volu	P.M. Peak Hour Tr	affic Volu	mes			



Highest Traffic Volumes (Vehicles per Hour)

N-5 Hoad:	3,306	IN-5 HORD:	2,963
E-W Road:	3,622	E-W Road:	4,149

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	e CO Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	2.2 5.7	1.9 4.6	1.6 3.4	3,306 3,622	1.23 1.23	0.09 0.25	0.08 0.20	0.07 0.15
P.M. Peak Traffic Hour North-South Road East-West Road	2.2 5.7	1.9 4.6	1.6 3.4	2,963 4,149	1.23 1.23	0.08 0.29	0.07 0.23	0.06 0.17

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.3	6.4	4.4
50 Feet from Roadway Edge	6.3	6.3	4.3
100 Feet from Roadway Edge	6.2	6.2	4.3

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Irvine Boulevard and Newport Boulevard.xls EIP Associates, a Division of PBS&J

12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0
Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

Roadway Data

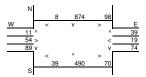
Fruit Street and Cabrillo Park Drive Existing Conditions Intersection:

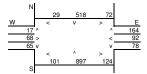
Analysis Condition:

			No. of	Average	Speed
		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	Cabrillo Park Drive	At Grade	6	15	15
East-West Roadway:	Fruit Street	At Grade	2	15	15

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,636	N-S Road:	1,783
E-W Road:	354	E-W Road:	598

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	e CO Cond	centrations	Traffic	Emission	Estimated	CO Conc	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	6.1	4.9	3.5	1,636	1.23	0.12	0.10	0.07
East-West Road	2.7	2.2	1.7	354	1.23	0.01	0.01	0.01
P.M. Peak Traffic Hour								
North-South Road	6.1	4.9	3.5	1,783	1.23	0.13	0.11	0.08
East-West Road	2.7	2.2	1.7	598	1.23	0.02	0.02	0.01

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Fruit Street and Cabrillo Park Drive.xls

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.1	6.2	4.2
50 Feet from Roadway Edge	6.1	6.1	4.2
100 Feet from Roadway Edge	6.1	6.1	4.2

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

EIP Associates, a Division of PBS&J

12/18/2006

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

Roadway Data

Fourth Street and Tustin Avenue Existing Conditions Intersection: Analysis Condition:

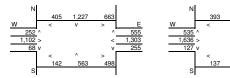
No. of Average Speed Roadway Type North-South Roadway: Tustin Avenue

A.M. Peak Hour Traffic Volumes

East-West Roadway:

P.M. Peak Hour Traffic Volumes

At Grade



Fourth Street

Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	3,665	N-S Road:	3,818
E-W Road:	4,376	E-W Road:	5,096

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С				
	Reference	CO Cond	entrations	Traffic	Emission	Estimated	CO Cond	entrations	
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet	
A.M. Peak Traffic Hour North-South Road East-West Road	2.2 5.7	1.9 4.6	1.6 3.4	3,665 4,376	1.23 1.23	0.10 0.31	0.09 0.25	0.07 0.18	
P.M. Peak Traffic Hour North-South Road East-West Road	2.2 5.7	1.9 4.6	1.6 3.4	3,818 5,096	1.23 1.23	0.10 0.36	0.09 0.29	0.08 0.21	

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.4	6.5	4.5
50 Feet from Roadway Edge	6.3	6.4	4.4
100 Feet from Roadway Edge	6.3	6.3	4.3

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Fourth Street and Tustin Avenue.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0
Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

Roadway Data

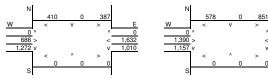
Fourth Street and SR-55 Southbound Ramps Intersection:

Analysis Condition: Existing Conditions

			No. of	Average Speed		
		Roadway Type	Lanes	A.M.	P.M.	
North-South Roadway:	SR-55 Southbound Ramps	At Grade	4	15	15	
East-West Roadway:	Fourth Street	At Grade	8	15	15	

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,282	N-S Road:	1,967
E-W Road:	4,000	E-W Road:	5,062

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	CO Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Fee
A.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	2,282 4,000	1.23 1.23	0.07 0.28	0.06 0.23	0.05 0.17
P.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	1,967 5,062	1.23 1.23	0.06 0.35	0.05 0.29	0.04 0.21

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.4	6.4	4.4
50 Feet from Roadway Edge	6.3	6.3	4.4
100 Feet from Roadway Edge	6.2	6.3	4.3

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Fourth Street and SR-55 SB.xls EIP Associates, a Division of PBS&J 12/18/2006

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

Roadway Data

Intersection: Fourth Street and Parkcenter Drive Existing Conditions

Analysis Condition:

				Average	Speed
		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	Parkcenter Drive	At Grade	2	15	15
East-West Roadway:	Fourth Street	At Grade	8	15	15
A.M. Peak Hour Traffic Vol	umes	P.M. Peak Hour Tr	affic Volu	mes	
N 153 V	0 0 F	N 271	0 V	0	F
164 ^	^ 181	269 ^	•		207
1,392 >	< 1,670	1,926 >		<	2,022

Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	498	N-S Road:	747
E-W Road:	3,379	E-W Road:	4,488

Roadway CO Contributions and Concentrations

Emissions = $(A \times B \times C) / 100,000^{1}$

	A ₁	A ₂	A_3	В	С			
	Reference	CO Cond	entrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	2.7 5.7	2.2 4.6	1.7 3.4	498 3,379	1.23 1.23	0.02 0.24	0.01 0.19	0.01 0.14
P.M. Peak Traffic Hour North-South Road East-West Road	2.7 5.7	2.2 4.6	1.7 3.4	747 4,488	1.23 1.23	0.02 0.31	0.02 0.25	0.02 0.19

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

A.M.	P.M.	
Peak Hour	Peak Hour	8-Hour
6.3	6.3	4.4
6.2	6.3	4.3
6.2	6.2	4.3
	Peak Hour 6.3 6.2	Peak Hour Peak Hour 6.3 6.3 6.2 6.3

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Fourth Street and Parkcenter Drive.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0
Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

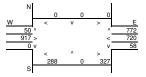
Roadway Data

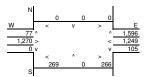
Intersection: Analysis Condition: Fourth Street and I-5 Northbound Ramps Existing Conditions

		No. of	Average Speed	
	Roadway Type	Lanes	A.M.	P.M.
I-5 Northbound Ramps	At Grade	2	15	15
Fourth Street	At Grade	8	15	15
		I-5 Northbound Ramps At Grade	I-5 Northbound Ramps Roadway Type Lanes At Grade 2	Roadway Type Lanes A.M. -5 Northbound Ramps At Grade 2 15

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	822	N-S Road:	1,673
F-W Road:	2.794	F-W Boad:	4.486

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	CO Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	2.7 5.7	2.2 4.6	1.7 3.4	822 2,794	1.23 1.23	0.03 0.20	0.02 0.16	0.02 0.12
P.M. Peak Traffic Hour North-South Road East-West Road	2.7 5.7	2.2 4.6	1.7 3.4	1,673 4,486	1.23 1.23	0.06 0.31	0.05 0.25	0.03 0.19

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.2	6.4	4.4
50 Feet from Roadway Edge	6.2	6.3	4.3
100 Feet from Roadway Edge	6.1	6.2	4.3

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Fourth Street and I-5 NB.xls EIP Associates, a Division of PBS&J 12/18/2006

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

Roadway Data

Fourth Street and Golden Circle Drive Existing Conditions Intersection: Analysis Condition:

			No. of	Average Speed		
		Roadway Type	Lanes	A.M.	P.M.	
North-South Roadway:	Golden Circle Drive	At Grade	4	15	15	
East-West Roadway:	Fourth Street	At Grade	8	15	15	

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	568	N-S Road:	899
E-W Road:	3,379	E-W Road:	4,438

Roadway CO Contributions and Concentrations

Emissions = $(A \times B \times C) / 100,000^{1}$

	A ₁	A ₂	A_3	В	С				
	Reference	CO Cond	entrations	Traffic	Emission	Estimated	CO Cond	entrations	
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet	
A.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	568 3,379	1.23 1.23	0.02 0.24	0.02 0.19	0.01 0.14	
P.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	899 4,438	1.23 1.23	0.03 0.31	0.02 0.25	0.02 0.19	

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.3	6.3	4.4
50 Feet from Roadway Edge	6.2	6.3	4.3
100 Feet from Roadway Edge	6.2	6.2	4.3

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Fourth Street and Golden Circle Drive.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0
Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

Roadway Data

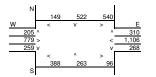
Intersection: Analysis Condition: Fourth Street and Cabrillo Park Drive

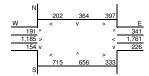
Existing Conditions

			No. of	Average Speed		
		Roadway Type	Lanes	A.M.	P.M.	
North-South Roadway:	Cabrillo Park Drive	At Grade	6	15	15	
East-West Roadway:	Fourth Street	At Grade	8	15	15	

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,989	N-S Road:	2,448
E-W Road:	3,099	E-W Road:	4,243

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	CO Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Fee
A.M. Peak Traffic Hour North-South Road East-West Road	2.3 5.7	2.0 4.6	1.7 3.4	1,989 3,099	1.23 1.23	0.06 0.22	0.05 0.18	0.04 0.13
P.M. Peak Traffic Hour North-South Road East-West Road	2.3 5.7	2.0 4.6	1.7 3.4	2,448 4,243	1.23 1.23	0.07 0.30	0.06 0.24	0.05 0.18

Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.3	6.4	4.4
50 Feet from Roadway Edge	6.2	6.3	4.3
100 Feet from Roadway Edge	6.2	6.2	4.3

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Fourth Street and Cabrillo Park Drive.xls EIP Associates, a Division of PBS&J 12/18/2006

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

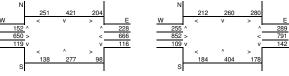
Roadway Data

First Street and Prospect Avenue Existing Conditions Intersection:

Analysis Condition:

		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	Prospect Avenue	At Grade	6	15	15
East-West Roadway:	First Street	At Grade 6		15	15
A.M. Peak Hour Traffic V	olumes	P.M. Peak Hour T	raffic Volui	mes	
N	I	N			1
251 4	121 204	212	260	280	
W - v	` F	W -	V	_	F

No. of Average Speed



Highest Traffic Volumes (Vehicles per Hour)

N-S Road: 1,533 N-S Road: 1,700 E-W Road: 1,976 E-W Road: 2,532

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A_1	A ₂	A_3	В	С			
	Reference	e CO Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	2.3 6.1	2.0 4.9	1.7 3.5	1,533 1,976	1.23 1.23	0.04 0.15	0.04 0.12	0.03 0.09
P.M. Peak Traffic Hour North-South Road East-West Road	2.3 6.1	2.0 4.9	1.7 3.5	1,700 2,532	1.23 1.23	0.05 0.19	0.04 0.15	0.04 0.11

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.2	6.2	4.3
50 Feet from Roadway Edge	6.2	6.2	4.2
100 Feet from Roadway Edge	6.1	6.1	4.2

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

First Street and Prospect Avenue.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0
Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

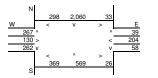
Roadway Data

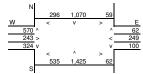
Intersection: Analysis Condition: First Street and Newport Avenue Existing Conditions

			No. of	Average	e Speed
		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	Newport Avenue	At Grade	8	15	15
East-West Roadway:	First Street	At Grade	8	15	15

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	3,344	N-S Road:	3,516
E-W Road:	1,530	E-W Road:	2,217

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	e CO Cond	centrations	Traffic	Emission	Estimated	CO Conc	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
AM Deels Treffic Herry								
A.M. Peak Traffic Hour North-South Boad	5.7	4.6	3.4	3.344	1.23	0.23	0.19	0.14
Fast-West Road	2.2	1.9	1.6	1.530	1.23	0.23	0.19	0.14
Edst-West hodu	2.2	1.9	1.0	1,550	1.23	0.04	0.04	0.03
P.M. Peak Traffic Hour								
North-South Road	5.7	4.6	3.4	3,516	1.23	0.25	0.20	0.15
East-West Road	2.2	1.9	1.6	2,217	1.23	0.06	0.05	0.04

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

First Street and Newport Avenue.xls

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.3	6.3	4.3
50 Feet from Roadway Edge	6.2	6.3	4.3
100 Feet from Roadway Edge	6.2	6.2	4.2

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996). EIP Associates, a Division of PBS&J

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

Roadway Data

First Street and Elk Lane Existing Conditions Intersection: Analysis Condition:

		Roadway Type	Lanes	A.M.	P.M.
North-South Roadway:	Elk Lane	At Grade	6	15	15
East-West Roadway:	First Street	At Grade	8	15	15
A.M. Peak Hour Traffic Vol	umes	P.M. Peak Hour Ti	affic Volur	nes	
W 435 17/ 0 ^ 1,305 > 8 v 39 (> <u>E</u>	N 421 0 ^ 1,870 > 24 v < S	126 V	317 > ^ < v > 657	E 0 1,407 205

No. of Average Speed

Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	944	N-S Road:	1,042
E-W Road:	3,874	E-W Road:	4,456

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	e CO Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	2.3 5.7	2.0 4.6	1.7 3.4	944 3,874	1.23 1.23	0.03 0.27	0.02 0.22	0.02 0.16
P.M. Peak Traffic Hour North-South Road East-West Road	2.3 5.7	2.0 4.6	1.7 3.4	1,042 4,456	1.23 1.23	0.03 0.31	0.03 0.25	0.02 0.19

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

12/18/2006

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M.	P.IVI.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.3	6.3	4.4
50 Feet from Roadway Edge	6.2	6.3	4.3
100 Feet from Roadway Edge	6.2	6.2	4.3

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

First Street and Elk Lane.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

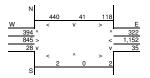
Roadway Data

Intersection: Analysis Condition: First Street and Cabrillo Park Drive Existing Conditions

		No. of	Average	e Speed
	Roadway Type	Lanes	A.M.	P.M.
Cabrillo Park Drive	At Grade	4	15	15
First Street	At Grade	8	15	15
		Cabrillo Park Drive At Grade	Cabrillo Park Drive Roadway Type Lanes At Grade 4	Roadway Type Lanes A.M. Cabrillo Park Drive At Grade 4 15

A.M. Peak Hour Traffic Volumes

P.M. Peak Hour Traffic Volumes





Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,315	N-S Road:	2,161
E-W Road:	2,861	E-W Road:	4,102

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A ₁	A ₂	A_3	В	С			
	Reference	O Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	1,315 2,861	1.23 1.23	0.04 0.20	0.04 0.16	0.03 0.12
P.M. Peak Traffic Hour North-South Road East-West Road	2.6 5.7	2.2 4.6	1.7 3.4	2,161 4,102	1.23 1.23	0.07 0.29	0.06 0.23	0.05 0.17

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

First Street and Cabrillo Park Drive.xls

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration2

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	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.2	6.4	4.4
50 Feet from Roadway Edge	6.2	6.3	4.3
100 Feet from Roadway Edge	6.1	6.2	4.3

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: D20950.01 Project Title: Santa Ana MU Overlay

Background Information

Nearest Air Monitoring Station measuring CO: Anaheim-Pampas Lane Background 1-hour CO Concentration (ppm): 6.0 Background 8-hour CO Concentration (ppm): 4.1 Persistence Factor: 0.8 Analysis Year: 2030

Roadway Data

First Street and B Street Existing Conditions Intersection: Analysis Condition:

		INO. OI AVE		Average	verage Speeu	
		Roadway Type	Lanes	A.M.	P.M.	
North-South Roadway:	B Street	At Grade	2	15	15	
East-West Roadway:	First Street	At Grade	6	15	15	
A.M. Peak Hour Traffic Volumes		P.M. Peak Hour Tr	affic Volu	mes		



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	337	N-S Road:	206
E-W Road:	2,777	E-W Road:	2,762

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000¹

	A_1	A ₂	A_3	В	С			
	Reference	e CO Cond	centrations	Traffic	Emission	Estimated	d CO Cond	entrations
Roadway	25 Feet	50 Feet	100 Feet	Volume	Factors ²	25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour North-South Road East-West Road	2.7 6.1	2.2 4.9	1.7 3.5	337 2,777	1.23 1.23	0.01 0.21	0.01 0.17	0.01 0.12
P.M. Peak Traffic Hour North-South Road East-West Road	2.7 6.1	2.2 4.9	1.7 3.5	206 2,762	1.23 1.23	0.01 0.21	0.01 0.17	0.00 0.12

¹ Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

Total Roadway CO Concentrations

12/18/2006

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration²

8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration²

	A.M.	P.M.	
	Peak Hour	Peak Hour	8-Hour
25 Feet from Roadway Edge	6.2	6.2	4.3
50 Feet from Roadway Edge	6.2	6.2	4.2
100 Feet from Roadway Edge	6.1	6.1	4.2

² Methodology from Bay Area Air Quality Management District BAAQMD CEQA Guidelines (1996).

First Street and B Street.xls EIP Associates, a Division of PBS&J 12/18/2006

² Emission factors from EMFAC2002 (2003).

² Emission factors from EMFAC2002 (2003).